SUMMER 1956

VERITAS ET UTILITAS

THE BUSINESS QUARTERLY

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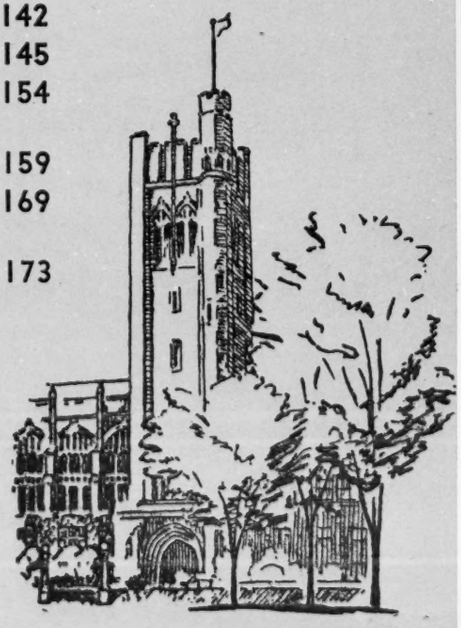

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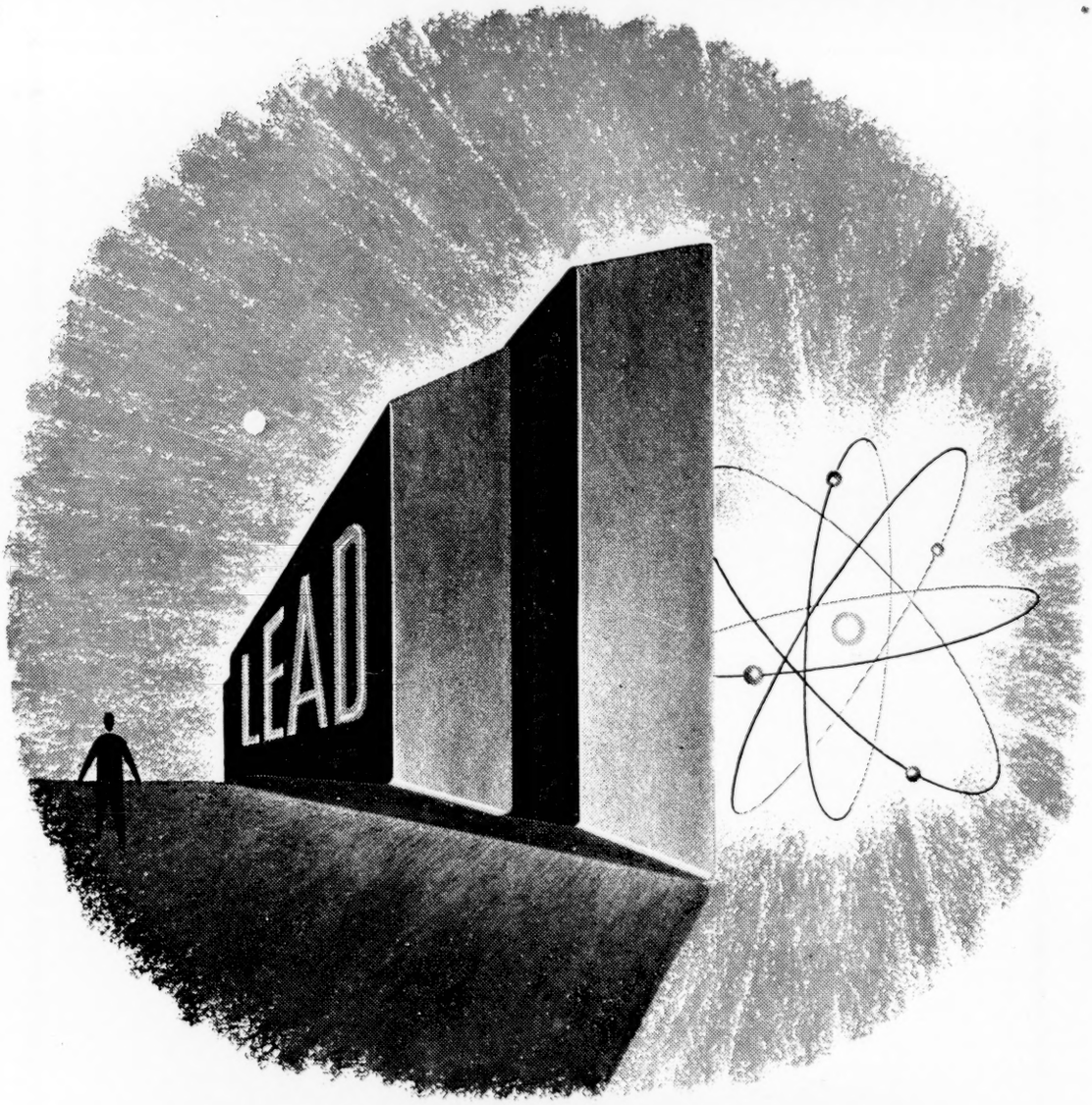

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THE BUSINESS QUARTERLY

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Editorial . . .

"The arrogance of age" wrote Edmund Burke to Fanny Burney, "must submit to be taught by youth." This issue of the Business Quarterly, containing as every summer issue should, a random selection of the student papers of the year, presents the enthusiasm of Canadian youth, believing that in growth, whether in population or national income, lies a bigger, better and wealthier Canada. This youthful view is shown in its welcome given automation and its assumption that this will solve problems not only of greater wealth but also of full employment and steady work.

In contrast to this heady and enthusiastic optimism of youth, Dr. Leopold Kohr warns in his "Aspirin Standard of Living", "The descent to lower levels might be averted altogether if Canada should put a stop to the growth of her society before it exceeds the boundaries of optimum development." Against youth's trust in growth and wish to foster it, Dr. Kohr in his experience warns that growing is not necessarily improving. Whereas graduates find in Canada's growing industries and gross national product green lights for investment, Stuart Armour warns, in this issue of contrasts, against statistics given a rosy flavour by comparisons over too short a period and indeed against the figures of gross national product itself because of their inclusion of a growing proportion of government expenditures.

Analysing the sources of the funds for the post-war expansion of Canada's leading industries, the Division of Research at the School of Business Administration has found surprisingly that all expenditures on capital expansion and increases in working capital were provided from profits and that such new borrowing as has taken place in the postwar period has not even equalled dividend distribution. An interesting table shows the postwar expansion of Canada's 25 leading manu-

(Continued on Page 180)

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Letters to the Editor . . .

Electric Storm

. . . Prof. Barber's comments are a great disappointment. I had hoped that my criticism of the C.E.M.A. report would stimulate discussion of a serious academic nature on some of the analysis which was considered unsatisfactory by myself and by others with whom I have discussed it.

Instead I find that one of the authors considers it necessary to defend himself against what he calls "thinly veiled" implications concerning his integrity. To support his claim that he has been accused of deliberate bias, Professor Barber makes reference to three statements, two of which I did not make. In any event, I had no intention of charging the authors with deliberate bias and feel that there is no basis whatsoever for that interpretation of my criticisms.

On one other matter a comment is necessary. I am accused of carelessness or dishonesty because I omitted a phrase which appeared at the beginning of a sentence which I quoted. "These are serious charges", or might be, except that there is a much more accurate explanation for the omission in question, i.e. it was not germane to the criticism I was making. With or without the phrase my objection is the same.

As for the relevance of my principal criticisms and the flimsiness of my logic, I am content that these matters should be left to the considered judgment of the reader, though I feel for him, because the literature is increasing.

H. E. English

. . . Mr. Barber and I joined Professor Knox in this study . . . It was asserted by Mr. English that we were the authors of a highly protectionist document, and that we were confused and neglectful. The protectionist charge is not supported by the conclusions of the

(Continued on Page 180)

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About Our Authors . . .

Dr. Leopold Kohr, Associate Professor of Economics at the University of Puerto Rico, graduate of London School of Economics, Innsbruck, Paris, Vienna and Toronto, has a rich background as war correspondent in the Spanish Civil War, secretary to Canadian historian Professor Wrong, and international law research associate to Carnegie Endowment for International Peace. In the fall he is publishing a new book which in its approach to the problem of size may revolutionize the teaching of economics.

Economic Adviser to the President of the Steel Company of Canada **Stuart Armour** describes himself as "a businessman who believes in private enterprise and in personal freedom which is at once its seed and its fruit". A World War I veteran, he has served with the Canadian government and as Assistant Treasurer of the Provident Trust of Philadelphia.

Clarence L. Barber, Professor of Economics at the University of Manitoba, co-ordinated and helped prepare both "Knox Report" and Manitoba's brief on the electrical manufacturing industry to the Royal Commission on Canada's Economic Prospects. Previously he was a professor at Queen's and McMaster Universities and served with the National Income Unit of D.B.S.

Stefan Stykolt, B.A. Toronto, A.M. Harvard, Research Associate at the University of Toronto and author of a number of papers on combines policy, is at present engaged in research for a monograph on Economic Analysis and Combines Policy.

Contributors from the School of Business Administration include **Miss Frances Oxley,** Director of Research, and eight 1956 graduates. The reports of **Georges Suart, Johan Lovink, Beverly Lanning** and **Rad Latimer** were originally prepared for the investment class discussion of Canada's growth industries. **William Collett, Bruce Daniel, Rad Latimer** and **Kirk Tambling** are co-authors of the report on automation for seminar discussion.

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Canadian Taxation and the Businessman

K. W. Lemon, F.C.A.

IN 1950 with the enactment of the "designated surplus" legislation (now subsections 2 to 9(b) of Section 28) an entirely new concept was introduced into the Canadian Income Tax Act with unfortunate consequences to the economy of our country. This new legislation, which represented only a single move in the endless contest in which tax payer and tax collector match wits in the finding and removing of loopholes in the taxing statutes, was designed merely to prevent a form of tax postponement which had been possible previously. In order to prevent this relatively minor and not too common form of tax postponement, however, our parliament saw fit to place on the statute books four pages of the most complex legislation which goes far beyond the original intention and in fact presents a serious block to the transaction of legitimate business. It is the type of legislation which seeks to repair a small pothole by building a complete barrier across the highway.

Prior to 1950, in order to avoid any increase in the burden of the double taxation which is inherent in the levying of tax on corporate profits, any dividend passing from one taxable Canadian corporation to another had been completely free of tax in the hands of the receiving corporation. This legislation, although generally highly desirable, did permit a form of tax postponement in certain cases where one Canadian company acquired control of another. In such circumstances the acquiring company could receive a tax-free dividend from the accumulated surplus of the new subsidiary and the proceeds of this dividend could be applied in part payment of the purchase price of the shares acquired. In this manner the vendors of the shares would receive indirectly as a capital payment corporate funds which, if withdrawn prior to the sale,

would have been taxable in their hands as dividends, and the payment of personal income tax on such funds would be postponed until such time as the surplus of the subsidiary was distributed to the shareholders of the parent company.

The 1950 Legislative "Cure"

The 1950 legislation purported merely to prevent this form of tax postponement by providing that dividends paid from "designated surplus" (i.e. surplus accumulated prior to the acquisition of control) would lose their usual exemption when received by a controlling company and thus would become taxable at ordinary corporation rates in the hands of the recipient company. Unfortunately, however, this apparently ready remedy has proved to be not at all simple in application and since 1950 annual amendments have been required to make the legislation workable. The end result is an unwieldy patchwork structure which in addition to serving the purpose for which it was designed has given rise to serious and unfortunate economic consequences.

This cure is subject to the obvious objection that it imposes triple taxation in cases where the pre-acquisition surplus of a subsidiary company is ultimately distributed to the shareholders of the parent company —a most unusual fiscal policy in times where steps are being taken to reduce the double taxation of corporate profits. Not quite so obvious but much more serious from the standpoint of the Canadian economy is the serious disadvantage to which a Canadian corporate purchaser of shares is put in comparison with a non-resident purchaser and the resulting difficulty which is placed in the way of retaining control of existing Canadian companies in Canada. This handicap is the presumably unintentional result of the designated surplus legislation which, on any withdrawal of pre-acquisition surplus, renders a Canadian corporate purchaser subject to tax at full corporate rates (47% in most cases — although surpluses accumulated prior to 1949 may be withdrawn at the rate of 15%) while a non-resident corporation is taxed at only 15%. Unfortunately this handicap will increase in significance each year with the increasing accumulation of surpluses earned after 1949.

This is thus yet another case of Canadian taxation penalizing Canadians and benefiting the foreigner. For these reasons alone the designated surplus legislation is clearly "a cure" which is much worse than the previous disease. As long as suitable safeguards are provided to ensure the collection of the appropriate tax on the ultimate distribution of accumulated surpluses to individual shareholders, there is no apparent reason why the whole concept should not be discarded completely.

The Aspirin Standard —or How to Measure Living Standards

Leopold Kohr

At a recent cocktail party, two middle-aged men became involved in conversation. One was a professor of economics at a major American university. The other was a professor of mechanical engineering at a famous Institute of Technology. Their talk touched upon both their fields. They discussed the economy of progress.

"How do you *wash your nylon shirts?" asked the one.*

"Very simple," answered the other. "I wash them with a nylon tooth brush. Nylon on nylon is very gentle. And it gets the smudges off collars and cuffs."

They also discussed plumbing, floor polishing, and cooking, glorying in the fact that progress had so simplified matters that all these things could now be done by themselves. But in the end one of them gave off an inadvertant sigh.

"Why the sigh?" asked the other.

"Well," was the reply, "I just thought that, fifty years ago, we would have had maids. Instead of using our time washing, plumbing, or cooking like unspecialized pioneers, we might have become better economists and engineers. In addition, our shirts would have looked pressed, and our meals would have tasted better. And instead of discussing housework at a party of scholars, we might have discussed the classics."

THE experience of the two professors is shared by an increasing number of people. On the one hand we witness the gigantic pace of progress and continuously rising output figures. But, on the other hand, we have the strange feeling that, instead of getting ahead in life, we have to give up every year something we could afford when, according to living-standard experts, we must have had less. When I was a student in the early 30s, I drove a racy sports car. As a college professor with an income that ranges me according to my own textbooks into the upper 30% of the richest people on earth in the richest period of history, I drove in 1955 a 1937 Lasalle, only to become a combination busrider-pedestrian in 1956. And the income classes above me have fared still worse. Mr. DuPont, in a much publicized story a few years ago, had to

abandon his palatial residence in Winterthur, Delaware. Now it is a museum, impressing the visitor with the high living standards of Mr. DuPont's ancestors, not his own. Similarly, in England, Lord Halifax, at about the same time, had to give up his castle and move into his stable. Though this was hailed as a great victory of democratic living, all the story demonstrated was the seemingly superior standards of the past, considering that the stable of then is found good enough to house a lord today.

However, it is said that, while the living standards of the upper strata of society have admittedly declined, those of the lower strata have risen. But have they? Where are the persons who have become richer as a result of Mr. DuPont having become poorer? On the contrary. Most seem to be carried along the same road — downhill. For as those who previously lived in palaces now live in houses, many of those who lived in houses now live in smaller ones or in apartments. Those who previously drank wine with their meals now drink water, and those who had maids now have none.

As to maids, it is frequently said that their disappearance is precisely a sign not of declining but of rising standards. For maids of former days are now housewives or business women. Quite. But why should maids have aspired to these higher levels excepts in the hope to have maids themselves? Yet, all they discovered was that, instead of escaping the chores of housework, they had to add to them. For, progress had given them not leisure, but time to take on another job. As to housework, they still must do all themselves. Thus, instead of having turned every maid into a housewife, progress seems to have turned every housewife into a maid.[1]

And workers seem to have fared only outwardly better. True, they have record incomes and record quantities of goods to spend them on. But if all is taken into account, can they really be said to be better off than workers of earlier times? They can write and read. But what is their main literature? The funnies! They can send their children to college. But what has college education become under the levelling impact of intellectual mass production made necessary by the unprecedented numbers of those now able to afford it? Though the greater

1. Two housewives, Jane Whitbread and Vivian Gadden, have in a humorous way well described the doubtful blessing of working just as hard at a higher level when they write in The Intelligent Man's Guide to Women (New York, Schuman, 1951) that "every labor-saving device of the past century has added to women's work. . . . A man invents a vacuum cleaner and . . . a co-conspirator popularizes Venetian blinds, so there will be something else for the vacuum cleaner to do in a jiffy. A man turns out a simple little mechanism to make melon balls, and it's no longer *comme if faut* to toss a plain hunk of melon into a fruit salad. . . . In the period when beer came in kegs, the man of the house hauled it himself. Now that it comes in handy little cans, even a woman can lug a dozen from the delicatessen. The man who speeds by a woman, stopped by a flat tire, can't be accused of lack of chivalry. He knows that the way they make jacks these days, even a woman can change a tire."

number of students has produced an ampler supply of professors, the very increase in teaching personnel has paradoxically become one of the principal causes not for the improvement but for the lowering of the level of academic offerings. As one of my colleagues, anxious to keep track of every development in his field, complained: "I read journals day and night. But so much is being written these days, that I have no time left to do any thinking myself." And what does the worker gain by the higher education of which we are so proud? Almost nothing. With so many other workers going to school, higher education, already intellectually sterile, seems even materially without *added* benefit, having become the competitive minimum requirement for almost any job.[2]

Need for Aspirin and Other Remedial Foods

And so it is not only with many intangible but also with many tangible commodities which progress has showered on us. To an inincreasing extent they have assumed the character of *remedial* goods whose possession, instead of improving conditions, merely prevents them from becoming worse. They are like aspirin tablets, whose invention has certainly improved our headaches. But have they improved our health? Hardly, if one considers that the less hurried and less progressive earlier periods seemed, along with fewer aspirin tablets, to have suffered also from fewer headaches.

As a result, what has actually risen under the impact of the enormously increased production of our time is not so much the standard of living as the level of subsistence. We swim in more water, but we are still in it up to our necks. In addition, along with the rising water level, many who previously enjoyed the luxury of the dry shore, are now up to their neck in water too. Thus, the question is no longer whether we would be worse off without our supermodern electronic gadgets, our cars, radios, or television sets. They have become our swimming equipment. The question is whether without them many of us could still exist at all. In other words, it would seem that we must produce the bulk of our famous progress commodities in such record quantities not for the sake of progress but for the same reason earlier ages needed to produce much less: just to live.

2. Comparing modern living standards with those of the past, it would occasionally be useful to remember periods dominated by men such as Lorenzo the Magnificent, of whom Paquale Villari writes (Life and Times of Savonarola, New York: Charles Scribner's Sons, 1896, p. 45) that he "encouraged all the worst tendencies of the age and multiplied its corruption. Abandoned to pleasure himself, he urged the *people* to lower depths of abandonment in order to plunge them into the lethargy of intoxication. In fact, during his reign Florence was a continuous scene of revelry and dissipation." But surely, a time that could afford such revelry and lethargy of intoxication, at both princely and popular levels, to say nothing of countless workfree saint's days, even the lowest beggar must have had a jollier time than the car and bathtub owning member of a modern labour union.

The Limits to Growth

Up to this point, the presentation of what might be called our *aspirin standard of living* has, perhaps, been too sweeping to be acceptable as more than at best an exaggerated generalization to be disproved once further economic growth will have accomplished the full transition to higher levels. I might not even be permitted to plead with Diogenes who "used to say that he followed the example of the trainers of choruses; for they too set the note a little high, to ensure that the rest should hit the right note."[3] But even if it should be granted that there is a grain of truth in my portrayal of existing conditions: What about the dazzling nature of an array of recent production and consumption figures which convey so irrefutably the opposite impression?

It is because of these legitimate question marks that the study of the problem put forward in this article cannot be confined to surface manifestations. Its analysis must go to its roots. In particular, the cause must be found explaining why, in the first place, the asserted decline of living standards is not merely a phenomenon of transition but the corollary of the very economic growth producing our dazzling output figures; and, secondly, why these figures may be correct, and yet convey a wrong impression.

In a superb study on the interrelationship of growth and form, the English biologist W. D'Arcy Thompson has shown why nature puts a stop to the growth of things once they have become large enough to fulfill their function.[4] A tooth stops growing when it can effectively bite and chew. If it grew larger, it would violate its function. It would impede the organism it is meant to strengthen. Similarly a snail after having added a number of widening rings to the delicate structure of its shell, suddenly brings its building activities, to which it seems by now accustomed, to a stop. For, as D'Arcy Thompson points out, a single additional ring would increase the shell sixteen times. Instead of adding to the welfare of the snail, it would burden it to such an extent that any *increase* in its productivity, plus an increasing proportion of its regular productivity, would henceforth have to be consumed by the task of coping with the added difficulties created by the extension of the shell beyond the limits set by its purpose. This consequence is all the more pronounced as, along with the geometrical growth of the physical structure, the resulting problems seem to have the tendency of growing likewise at a geometric ratio while the ability of the snail to catch up with them might, after a point, at best increase at an arithmetic ratio.

3. Diogenes Laertius. The Loeb Classical Library. Vol. 2, p. 37.

4. W. D'Arcy Thompson. On Growth and Form. Cambridge University Press, 1942.

This is the fundamental philosophic reason why all growth, so beneficial up to a certain point, becomes the principal cause of difficulty once it goes beyond it.

Social Problem—Not to Foster Growth But How to Stop It

But nature has not confined the mechanism of growth to biological organisms alone. In particular, it has extended it also to social organisms such as cities or states. The only difference is that, in the case of the latter, human intelligence and technological progress have dulled the instinct of nature with the effect that the social application of the principle is not grasped with half the lucidity with which its physical or biological applications have been recognized. Hence the undiminished emphasis of political and economic theorists on continued social growth in the midst of multiplying signs indicating that in most larger contemporary societies the problem is no longer one of how to *foster* growth but how to *stop* it.

For just as the size of a tooth or a snail's shell, so is the size of a city or a state in the last analysis determined by the function they are meant to fulfill. According to whether we are collectivists or individualists, this function may have different aspects. However, since living standards are meaningful only from the viewpoint of the individual person, we may dismiss the collectivist aspect from this analysis. And as to the individualistic interpretation, we need but make reference to Aristotle, who showed most convincingly that the function of the state is to provide the individual citizen with the substance of a good life, the *summum bonum.*

This means that, once a society has become large enough to furnish: (a) the material means of existence in satisfactory, though not necessarily gluttonous, abundance; and (b) the elements of cultural development — leisure to think, taverns to debate, churches to pray, universities to teach, theatres to inspire, the arts to enchant — further growth can no longer add to its basic purpose. It has reached the point of diminishing living standards.

The only question concerns the location of this point. Aristotle considered "the best limit of the population of a state . . . the largest number which suffices for the purposes of life, and can be taken in at a single view."[5]

In antiquity or during the Middle Ages, any city or state between 20,000 and 500,000 inhabitants would probably have fitted this specifica-

5. Aristotle. Politica. 1326b.

tion. As a result of technological development in the field of communication, our own time has extended this limit to populations numbering perhaps 10 or 15 million. But wherever the point of diminishing living standards may lie, it is located within the relatively narrow boundaries set by the small stature of man. Once it has been passed, further growth of a community will add not the individualistic function of providing a good life, but to the collectivist function of maintaining itself for its own reason; and the individual, instead of being assisted by social growth, will henceforth be impeded by it.

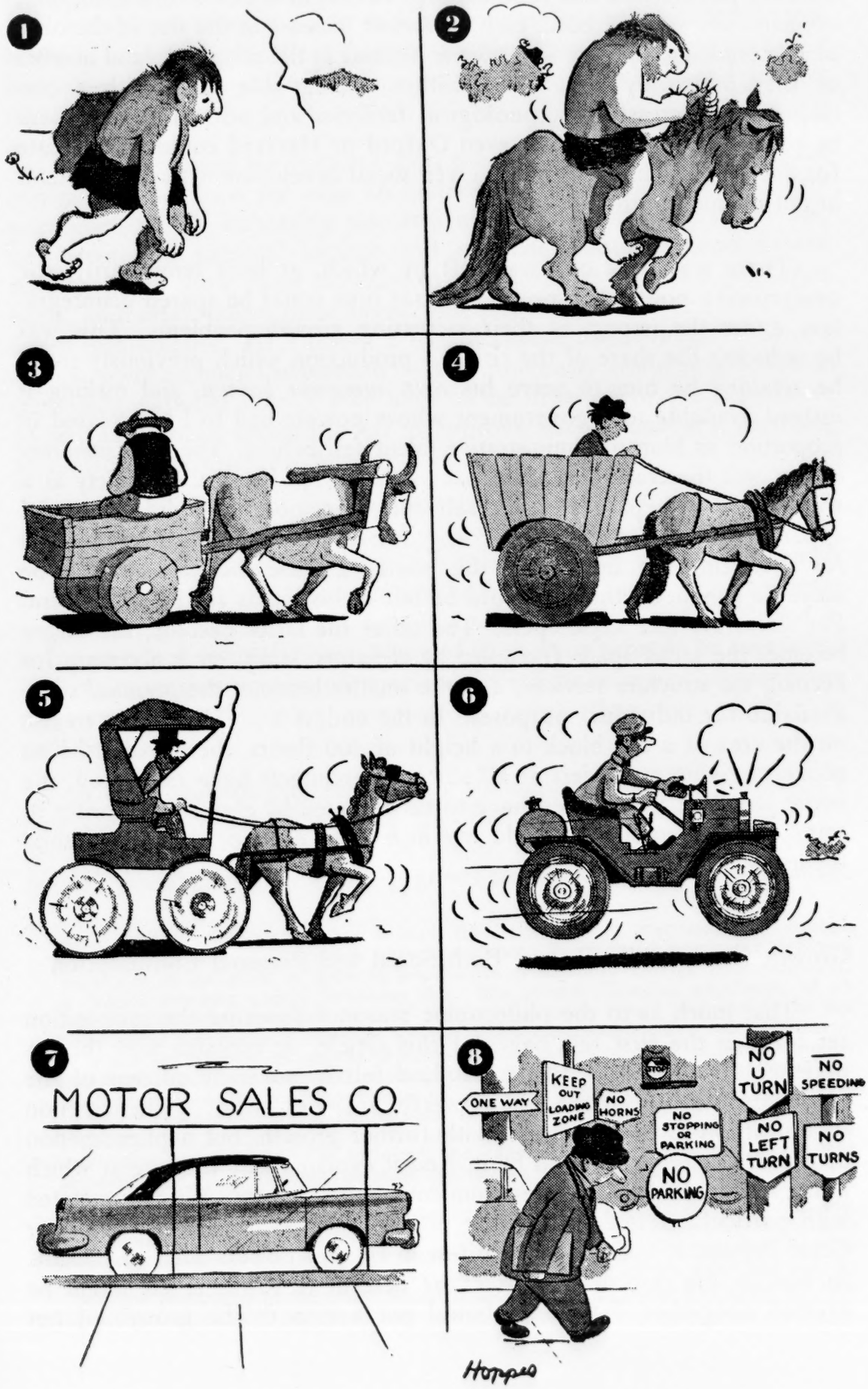
Ancient Greece — which, with its emphasis on the individualistic purpose of existence, has given Western man the basic principle of his civilization—had its political instincts finely attuned to the question of optimum social size. As a result, whenever a state reached the point of diminishing living standards, something like this would happen. A delegation would be sent to the Delphic Oracle and, after the rendering of due sacrifices and the deposition of appropriate gifts, Apollo, through the mouth of his priestess, would communicate the following advice: Cut down trees in the forest. Build ships. Man them with young men and women. Then send them forth to found new cities across the seas. There, growth could set in anew until the maturing societies could produce once more in creative competition with mother and sister lands the prerequisites of a good life — inns, theatres, universities.

Modern Individual Crowded Out by Need for Social Space

In our own time, however, the Greek way was no longer so easy to duplicate, considering that the world's supply of available territory had in the meantime nearly come to an end. As a result human societies, instead of growing in the biological way by splitting and multiplying, have long begun to grow by unification and integration. Instead of becoming more numerous in order to keep the size of the state adjusted to the stature of man, they have become fewer and larger.

At first, this process did not greatly interfere with the continued development of higher personal levels of living. For the simultaneous advance of technology, accompanied in addition by improvements in techniques of social administration, made it for a time possible to keep abreast of the rapidly multiplying problems of unrestrained social growth. But with no *biological* law to check continued *social* growth, and with political instincts deteriorating in proportion as social complexes became larger and more difficult to encompass, the limit had sooner or later to be reached at which the different growth ratios governing social problems and human talent became caught in the same insoluble discrepancy which Thomas Malthus had assigned to the relationship between in-

LOW-HIGH-REVERSE



creasing populations and food supply. For, as in the case of a shell, once optimum size was exceeded, each *arithmetic* increase in the size of the community tended to produce a *geometric* increase in the magnitude and number of the community's problems, without being able to furnish a corresponding increase in technological facilities and administrative talent to keep up with them. Not even Oxford or Harvard could compensate for the pace at which, beyond a given social development stage, problems began to outrace their solutions.

There was only one way left by which, at least temporarily, the overgrowing political complexes of our time could be spared disintegration under the impact of their increasing growth problems. This was by reducing the share of the citizen's production which previously could be retained by him to serve his own *summum bonum,* and making it instead available to a government whose powers had to be increased in proportion as human administrative talent fell behind. The new *summum bonum* was therefore no longer that of the citizen but that of society as a whole, with the paradoxical result that, the more splendid the social apparatus became after having outgrown the form and size best suited for sheltering the individual, the poorer became the individual. The more he produced, the less could be left in his hands for his enjoyment. For states are like skyscrapers. The taller the latter become, the larger becomes the *social* space (occupied by elevators, stairs, etc.) necessary for keeping the structure serviced, and the smaller becomes the *personal* space available for individual purposes. In the end, if a building were to rise on the area of a city block to a height of 400 floors, there would be no office or living space left at all since, as architects have calculated, the entire structure would then have to be occupied by elevators in order to transport the people who could live in it if the elevators had not pushed them out.

Growth Commodities Reduce Both Social and Personal Consumption

That much as to the philosophic reason supporting the proposition set forth in the first few pages of this article. It explains why the experience of a declining living standard felt by so many citizens of the seemingly most advanced and powerful societies is not a phenomenon of transition, to be conquered with further growth, but a phenomenon of growth, to be aggravated by it. And it explains why the rate at which living standards decline varies from country to country. What was stated with particular reference to great powers such as the United States or Great Britain, is not half as manifest in smaller powers such as Canada. In fact, in the case of the latter, the descent to lower levels might be averted altogether if Canada should put a stop to the growth of her

society before it exceeds the boundaries of optimum development.[6] And it need not at all apply to such happy smaller states as Switzerland, Iceland, or Denmark whose narrow political boundaries automatically insure optimum size as long as these countries resist the lures and dangers of unification.

But what about the figures? For, the philosophic deductions to the contrary, these show not only an increase of net national product proportionate to the increasing size and needs of great powers, but also an increase in national income and national consumer expenditures. And they still show these increases to a dramatic extent on a per capita basis, and after rising price levels and population changes have been taken into account. As a result, it would appear that, though — after a certain point of social expansion — a continuously rising proportion of increasing national output may have to be diverted to the support of society as a whole, enough is left to improve, even if only at a declining rate, also the position of the individual.

And yet, in spite of the dramatic rise particularly in the field of per capita consumption, the portrait of improvement conveyed by it is highly misleading. Not that the figures are wrong, by any means. The error arises from the fact that they are not broken down into more significant and revealing categories. For not all consumer goods can be included in living standard computations. Many of them must actually be subtracted if they are to give proper information, since their increased consumption measures our multiplying complexities rather than our advance in well being.

A more realistic picture of living standards depends therefore on a new commodity breakdown. In the first place, we must distinguish between two general categories of goods: *social* and *personal* consumer goods.[7] Social consumer goods — goods consumed by society to maintain

6. Social growth takes place either through the influx of new populations or through the centralization and integration of existing ones. One way of preserving optimum social size in the midst of growing populations is therefore through decentralization. A federal structure greatly facilitates this. The present Canadian population of 15 million inhabitants, spread across half of North America, would undoubtedly be too large to be administered centrally without a disproportionate effort of government. It is not too large in its present division into ten provinces. And, if decentralization and federalization are permitted to continue as the population rises, the optimum size of Canada's population, divided into an increasing number of highly autonomous provinces (perhaps 40 or 50 in the place of the present ten), might be extended far beyond present limitations. If, on the other hand, the American example of national unification and integration is followed, the consequences of slowly declining living standards will be as inevitable as those experienced in the United States.

7. Though goods consumed by society, either for maintaining government or for building, maintaining, and expanding capital needed to feed private consumption, are not usually referred to as consumer goods, the term is useful in modern living standard analysis to emphasize the similarity between the natural personality of the individual and the corporate personality of the state. For it is increasingly the latter that reaps the chief advantages of material progress.

its political and economic apparatus, and represented by government expenditures on all levels as well as by a large proportion of private investment expenditures — may, however, be largely discounted in this analysis since they measure not personal but social standards. In addition, being largely paid for by taxes, they are so clearly identifiable as not the fruit but the cost of existence that there is no danger of having their greater availability confused with greater welfare. Nevertheless they are indirectly of significance since their seemingly geometric rise with every arithmetic increase in the size of a state is responsible for the declining proportion of increasing output that can be diverted into personal channels. Since their ratio of increase depends on the growth of the size and power of societies, social consumer goods might also be called *growth* or *power commodities.* They are remedial in nature. Their hallmark is that their production does not improve the status of their producers. Examples of such commodities are safety, traffic, and police services, as well as military expenditures whose geometric relationship to social size is clearly indicated if we compare, for example, the defense figures of various countries according to their size.[8]

What Is a Luxury?

The most important category of commodities for a living standard analysis is, however, the category of *personal* consumer goods. For if the latter registers an increase on a per capita basis, it becomes, at least theoretically possible to deduce that also the living standard has risen. But even then, the conclusion is not automatic, since greater personal consumption is not necessarily a sign of better living. If changed social conditions force a person to walk twice as far to his place of work, the availability of a second pair of shoes can hardly be said to have made him any richer.

8. According to a table reproduced in TIME, February 6, 1956, the following countries, approximately though not quite arranged in the order of size, spent the following percentages of the Gross National Product on defense: Luxembourg, 3.9%; Denmark, 3.9%; Belgium, 4.4%; Norway, 4.7%; Italy, 4.8% Portugal (and its empire), 5.1%; Greece, 7.2%; Netherlands, 7.4%; Turkey, 8.0%; France, 8.1%; Canada, 8.8%; United Kingdom, 10.1%; United States, 11.6%. In terms of billions of dollars, the progression is even more evident if we take a characteristic series of countries: Luxembourg, .01; Belgium, .37; Canada, 1.62; France, 3.13; United Kingdom, 4.58; the United States, 40.54. Canada, twice as large as Belgium, spends four times as much on defense. The United States, a little more than three times as large as Great Britain, spends ten times as much. A similar phenomenon of disproportionately rising social costs can be seen if we compare cities of various sizes. According to Professors Schultz and Harris (American Public Finance. New York: Prentice-Hall, 1949, p. 34), city expenditures were found to be "directly and closely related to population, increasing steadily with the size of the population." As reasons for this is mentioned the fact that "increasing density of urban and suburban population also necessitates special 'remedial' public functions. City crowding breeds problems of sanitation, crime, social welfare, and traffic, which are less pressing in the country side. . . . Some of the cost of city government results from 'remedial' functions that ward off the social disadvantages of urban growth rather than confer added social benefits." (Minor unevenness in the series cited above are due to conditioning factors such as war consequences, which space limitations prevent explaining.)

As a result, if we are to bring the problem into its proper focus, it is necessary to resort to a further breakdown of personal consumer goods into the well-known sub-categories of *necessities* and *luxuries*. But since the increase in necessity consumption merely reflects an increase in our needs, the only truly relevant category for living standard appraisals is that of *luxury commodities*. The goods measuring our welfare are therefore not goods *within* the subsistence level, but the changing quantities of goods available to us *above* it.

But here the principal difficulty sets in. For, what are luxuries? Mathematically, the answer would be simple. Luxuries are total personal consumer goods minus necessities, just as luxury consumption is total personal consumption minus subsistence level consumption. But mathematics does not tell us what is meant by subsistence level. For just as it cannot define the concept of luxury, so it cannot define the concept of necessity.

However, where mathematics fails, logic may succeed. All that is needed to discern the elusive boundary between luxuries and necessities is to carry the process of categorization one step further. For necessities can again be subdivided into three kinds, two of them long familiar. In the first place, there are the *biological* necessities, such as food, clothes, and shelter. Without them, physical survival is impossible. Secondly, there are the *cultural* necessities imposed by social environment, such as the *style* of food, clothes, and shelter. An example of the former would be a coat or a raw chicken, of the latter a tie or a cooked meal. As already men such as Marx, Pigou, or Heller have pointed out, it is due to the changing nature of the second category that consumption may rise above biological requirements without indicating a rise in living standards.

But there is a heretofore neglected third category whose existence explains why consumption may rise above both biological *and* cultural necessities, and still not entail a rise in living standards. The necessities of this third category, resulting from the technological difficulties caused by the scale and density of modern life, might be called *technological* necessities or *density commodities*. And these have become the most significant of all. For while cultural necessities were responsible for introducing the concept of a rising subsistence level, density commodities are responsible for the acceleration of that rise. It is primarily due to them that, in spite of the increase in overall consumption, the line, beyond which luxurious ease sets in, is constantly receding, and that the luxury margin, in spite of increased overall production, is constantly diminishing.

The High Cost of Density

Typical examples of density commodities which, in contrast to the aforementioned power commodities, swell our *personal* consumption figures without adding to our welfare are: driver's licenses, signal lights on cars,

urban parking space, commuter services, a large part of what *Punch* has called *stimulants for self,* not all but a major proportion of privately purchased legal and medical services, or replacement goods for wear and losses such as would never have occurred in less harassed smaller societies. To have an idea of the magnitude of the increasing consumption of unwanted density commodities, we need but bring a few facts before our eyes. Replacements rendered necessary in 1950 as a result of fire losses in the United States, for example, amounted to almost $700,000,000.[9] Those caused by the nine million casualties of the same year — of which 35,000 were fatal car accidents, more than the loss of life incurred in many a major war — to $7,000,000,000.[10] Private medical costs amounted in 1953 to $10,200,000,000.[11] And the annual repair work resulting from nothing but the excessive clutch use of car drivers in the dense streets of the City of New York was in excess of one billion dollars at a time when the entire budget of the State of New York, the largest of the union, was still below that figure.

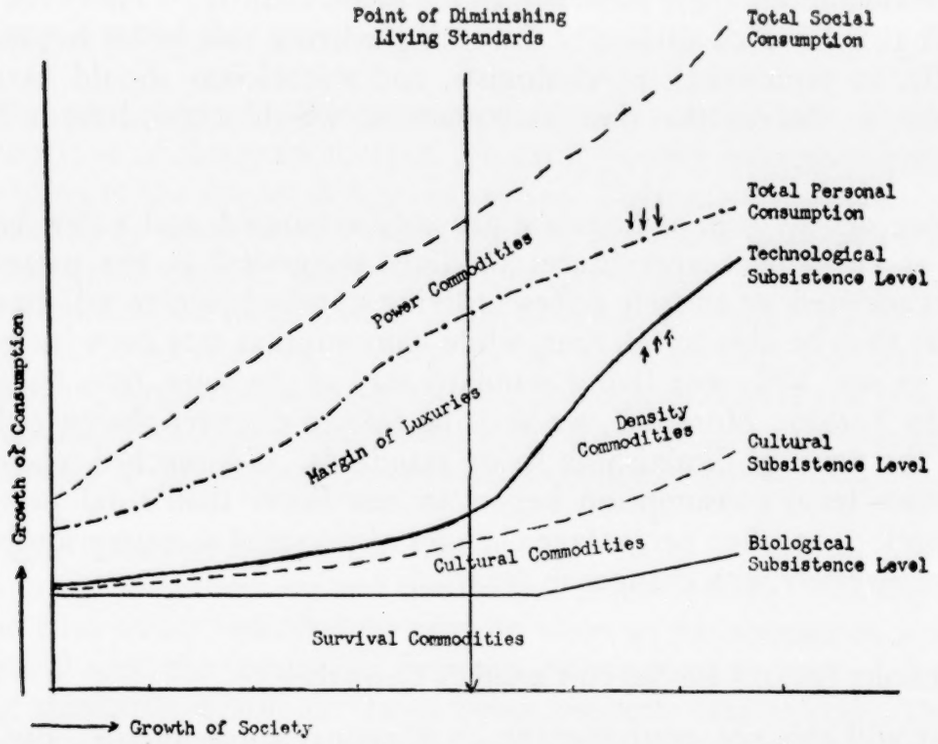
The Point of Diminishing Living Standards

As a result of the preceding considerations, it seems clear that the existing method of evaluating living standard changes has lost much of its usefulness. It was satisfactory as long as societies were below their optimum size. Up till then, additional economic growth meant indeed that much of the new product could be made available for increased personal consumption not only within but also above the subsistence level. Once they developed beyond optimum size, however, increased consumption ceased to reflect changes in living standard levels. It could now be just as well a sign of worsening as of improving conditions.

A new measure must therefore be developed which emphasizes changes not in total consumption but in luxury consumption. For only changes in the latter reveal with precision whether we move upwards or downwards. Since it is thus luxuries which really count, the new living standard measure might, in analogy to a thermometer, be called a *luxometer.* Relevant changes would be expressed in degrees of *luxes* rather than in percentages, a *lux* representing a unit of above subsistence level consumption.

But to arrive at a workable concept of luxury, it is important, as we have seen, to subtract from total consumption not only biological and cultural necessities but, above all, the heretofore neglected category of technological necessities or *density commodities.* Unlike the other two categories, which are both needed and desired, they exert an undisguised depressing effect since they are needed *without* being desired. The only

9. Facts & Trends, National Board of Fire Underwriters, Vol. VIII, No. 4.
10. National Safety Council Report, 1950.
11. New York Times, January 24, 1954.



The diagram shows the changing ratios at which the various segments of total national product are consumed. Up to the point of diminishing living standards, increased national product (total social consumption) indicates the possibility not only of rising overall personal consumption but of rising per capita luxury consumption as well. The level of living improves. But beyond it, the picture changes. Under the combined pressure of now disproportionately rising socially consumed power commodities from above, and of personally consumed density commodities from below, the margin of luxuries becomes narrower in spite, and partly because, of overall production and consumption. Discounting power commodities, the crux of the mystery of declining living standards in the midst of rising consumption thus lies in the disproportionate rise in density consumption which sets in when population numbers, technological advance, and population movement (velocity) have pierced the boundary of optimum development.—The table above is applicable to all countries. But not all have developed beyond the point of diminishing living standards. In addition, smaller countries, unless they adopt excessive programmes of social glory, never need to go beyond it in the first place. As a result, the part of the chart located to the right of the line of diminishing living standards applies really only to large scale societies. Of these, the United States and Great Britain seem, on the basis of available figures, almost certainly to have passed this line. But since this happened only recently, in the United States probably between 1945 and 1950 (see diagram and analysis in The American Journal of Economics and Sociology, Oct. 1955, p. 104), little mental adjustment has been made so far to permit a proper appraisal of the new situation. The downward development is therefore still considered temporary though all indicates its permanent nature.—As long as the point of diminishing living standards has not been passed, one may say that the closer a country is to it, the better. When it is at the point of passing, as is perhaps the case in Canada, growth through division rather than through integration may postpone the need of crossing it for a very long time. A more precise evaluation of Canadian figures is at the moment in preparation.

difficulty is one of definition. For, most density commodities such as travel services, cars, or "stimulants for self," set out as luxuries before social overgrowth transformed them into headache-producing necessities. And, depending on the density, integration, and technological development of a society, the transition from the one to the other category may take place at quite different times. A car may be a necessity in one region

and a luxury in another, even within the same country.[12] However, just as zoologists have no difficulty discerning when a caterpillar becomes a butterfly, so economists, psychologists, and statisticians should have no difficulty to discern the time and place at which a good turns from luxury into necessity.

Once density commodities are properly evaluated, and a new breakdown of consumer expenditures on lines suggested in the preceding pages is adopted, an entirely different living standard picture will emerge. We may then be able to tell that, while consumption may have increased by, let us say, 10%, our living standard may at the same time have declined by 3 *luxes*. Moreover, we shall be able to discover the exact location of the point of diminishing living standards. It is reached whenever subsistence level consumption begins to rise faster than total personal consumption, or when percentage changes of personal consumption begin to move inversely with changes in *luxes*.

What Limits Should Be Set to Canada's Growth

But will this not destroy many an illusion? Undoubtedly. But this should not detract us from the introduction of a new method of measurement. For, once it provides us with facts instead of illusions, we may turn it to good account. Being able to discover a community's point of diminishing living standards, we shall be in a position to call a halt to further development instead of pushing it over the crest. This does not mean that stagnation should then be cultivated. It merely means that, beyond that point, growth should be fostered along ancient Greek lines, in the biological way, through splitting, multiplication, and duplication, not through integration and unification — the great modern ideals.

In a country like Canada, still endowed with vast unexploited regions, the conditions for such a development of growth without the danger of depressing living standards are still great. A tool such as the *luxometer* would therefore be a highly useful instrument, helping to determine when optimum size is reached in a given area, and when subdivision should take place. In countries such as most of the world's great powers, where the point of diminishing standards has apparently already been passed, the road of regional rather than centralized development, with the possibility of another era of rising living levels, would

12. Many necessities in the United States are still luxuries in Switzerland, with the paradoxical result that their diminished availability in the latter may indicate a better life than their abundance in the former. Also climate and other differences between countries and regions are of significance in determining the nature of the transition from luxury to density commodities but, other things being equal, none more so than social size (the attributes of social size being population number, density, administrative integration, and technological development. Denser countries, such as India, may socially be of smaller size than less dense and populous societies such as the United States, which are technologically more advanced).

be more difficult to pursue, since ingrained trends of thought have for too long stressed that salvation lies in the opposite direction.

But even there, the *luxometer* should prove a useful tool. For in spite of their love of integration, even the great powers have shown signs of awakening to the deeper designs of nature. Their giant firms have begun to abandon in some cases their monolithic structures in favor of smaller regional development. Cooperative enterprises have gained ground with their emphasis on local rather than national or world markets. And Russia, until so recently devoted to the ideal of One Country - One Factory, no longer considers it an outright sign of Trotzkyite conspiracy and capitalist reaction if her leaders advocate a return to smaller regional autonomies in preference to centralized economic unity.

This indicates that great powers also have become mindful that union and integration are not the answer to everything. But there is as yet no firm policy behind their groping since, in the absence of a sharper analytical tool, the connection between growing social size and declining living standards is still far from being properly understood. The new measure would bring this into the open. But while it might not enable the great powers to move back to a position of rising standards, the information gained by it might lead to patterns of economic and political organization which would at least prevent further deterioration.

Britain's Falling Standard of Living

For a Briton to have as much purchasing power as £1,000 gave him in 1913-14, he must now earn £10,000. To have as much purchasing power as £2,000 gave him in 1913-14, he must earn nearly £100,000. The following table was presented to the British Parliament on December 6, 1955.

At 1913-14 Rates		*At 1938-39 Rates*		*At 1954-55 Rates*	
Gross Earned Income	*Net Income After Tax*	*Net Income After Tax*	*Equivalent at 1914 Prices*	*Net Income After Tax*	*Equivalent at 1914 Prices*
£	£	£	£	£	£
1,000	962	855	548	822	216
2,000	1,925	1,608	1,031	1,472	387
5,000	4,708	3,446	2,209	2,612	686
6,000	5,575	3,978	2,550	2,887	758
7,500	6,950	4,736	3,036	3,224	847
10,000	9,242	5,888	3,775	3,687	968
20,000	18,408	9,976	6,395	4,412	1,159
50,000	45,908	20,451	13,110	5,912	1,553
100,000	91,742	36,076	23,126	8,412	2,209

Business Hero

"For some years now publicists for American business have voiced concern that the American novel paints so uniformly unfavourable a picture of the American business leader. From Dreiser and Upton Sinclair to John Steinbeck and Taylor Caldwell the rogues' gallery lengthens depressingly. Even when the brushwork does not delineate the complete scoundrel, devoid of morals or public spirit, the canvas still tends to be unflattering—philistine "regular guys" like Babbit, disintegrating drunks like Dos Passo's Charlie Anderson, slimy two-timing Uriah Heeps like J. P. Marquand's Willis Wayde. The demand for something more in keeping with the boardroom's own idea of what it sees in the mirror when shaving every morning has—primed by the interest of magazines like *Life*—called forth more admirable commercial characters like Cash McCall, the best-selling made-to-measure figure of business chivalry by Cameron Hawley. But output, in terms of literary units, is not satsifactory. Business heroes in shiny magazine stories may be models for the rising executive; but, as *Fortune* showed, it is the stuff arbitrarily labelled as literature by college professors that gets into the hands of the innocent and hero-worshipping young and warps their idea of the captains of industry.

"It might be supposed that, if this is the position in America's literature, it would be a good deal worse in Britain's. For Britain is the home of the industrial revolution, where Marx sowed and the Hammonds reaped. Dickens certainly made an ominous beginning with Gradgrind and Josiah Bounderby. But these reprobates were reformable, as was the merchant-banker Dombey, whose obsession with the problem of management succession led to such regrettable results. On the other hand the Cheerible Bros. mellow the picture of office life early in the gaslight era. But Dicken's lead was negligently followed up. At a time when the British businessman was conquering the world, Victorian novelists saw little of interest in him. "John Halifax, Gentleman" (the title is significant) is a full-length study; but one has to search Meredith, George Eliot, or even Disraeli to find a substantial businessman. Here and there in Thackeray or Trollope a businessman—usually a merchant—is seen struggling to rise in genteel society . . .

"In Victorian times he was still at the tradesman's entrance, as unimportant an 'extra' as the servants who fetched and carried for the main characters. At most he provided a pretty daughter to tempt a baronet from the path of duty. The turning point was reached when belatedly the novelist realized that the businessman was not only rising into society, but the new industrial order was displacing the old country house rule with which he was for so long familiar. The clash between the new and the old managerial classes produced the situation in Galsworthy's play *The Skin Game;* and the theme has been much elaborated since . . .

"Because business was the motive power of American culture the American novelist, whatever his purpose—romantic, satirical, reformist—had to get under the skin of the senior executive if he was to portray the contemporary scene accurately. The English novelist tried to treat the British businessman simply as a special case of the ruling class whose foibles he and his readers knew and loved so well.

"Literary traditions die hard. Though the scene is changing fast, the English novelist continues in the main, to re-enact Vanity Fair in modern dress—to squeeze the last drops of literary juice from artistic and literary life. His knowledge of business is still scanty and he prefers the more flamboyant business figures—the advertising tycoon, the film magnate, the press baron. So far, his main interest in business life has been in the struggle for power at boardroom level. This was the main theme of J. B. Priestley's "Daylight on Saturday", and Nigel Balchin's "Sundry Creditors"; both these novels suggest that a factory is a manageably small frame for getting characters together, as was country house or village life . . .

"In contrast to the American businessman, in fact, the British executive is not so much caricatured as ignored."

—*The Economist, April 28, 1956.*

"Lies, Damn Lies and Statistics"

Stuart Armour

Are Canadian statistics sufficiently timely? Could their publication be made more current? Although possibly not quite so disheartened as Disraeli, whose views we use as title, Stuart Armour, the economics adviser to the Steel Company of Canada, points out pungently the dangers that can easily arise from delayed and often misunderstood, indeed misrepresented figures.

IT is now no secret that when the Bank of Canada reduced its rediscount rate from 3 to 2½% in February 1955, it did so in face of the fact that Canadian business was already on its way out of the 1954 doldrums. As a result of what turned out to be a rather unnecessary shot in the arm, the Canadian economy in the last three-quarters of 1955 galloped ahead at break-neck speed. In doing so, it set in train inflationary forces which may not yet have made manifest their full trouble-making potential.

Why, then, did the Bank of Canada go off the deep end as it did in February 1955? Obviously, political considerations — not necessarily partisan in character — played no inconsiderable role. But probably the main reason was that neither the Bank of Canada nor the Department of Finance really knew in February 1955 the extent to which business was already well on the way to working itself out of the recession which started in the last few weeks in 1953. Indeed, business itself did not begin to suspect until early in 1955 that the national economy was once more on an upward course.

The trouble is, of course, that while our statistical series are now much more current than they were even five years ago, they still lag maddeningly behind events. Thus we never know until the current quarter has almost passed into history what is the officially estimated value of production in the previous three months. What is true of national production statistics is true of others equally important.

The fault undoubtedly lies at the door of business itself to some considerable extent. Many Canadian business concerns still seem to think that the furnishing of statistics to the Dominion Bureau of Statistics (D.B.S.) is a rather useless chore to be put off as long as possible.

But it also results from slower issuing of statistical material by Ottawa than is the case with Washington. For instance, the U.S. national

accounts for 1955 were fully reviewed in the Survey of Current Business of the U.S. Department of Commerce which was received in Canada on February 28, 1956. Canadian national account figures for 1955 were not received from the D.B.S. until March 16, 1956, and then only in "preliminary" form. More than one month later the Canadian 1955 national accounts had still not been fully reviewed by Ottawa.

How to Show Off a Good Figure

However, it is not only the slowness with which statistics become available that contributes to the grey hairs and ulcers of those who need figures in their business lives as a jet liner needs fuel. Another important cause of trouble is the manner in which statistics are presented.

Ottawa, for instance, has never yet caught on to the practice of putting current yearly or monthly or weekly statistics ahead of those for previous periods. Thus in nearly every case, the D.B.S. issues its figures showing January first and the current months last; and those for the current year after those for preceding years. As a consequence, when the figures are reproduced for the use of busy executives, it is usually necessary to transpose them so that the most current figures come first. This is not only a time-consuming operation, but also one which increases the possibility of error.

Another continuing annoyance is the fact that whereas the seasonally unadjusted volume Index of Industrial Production is still on base 1935-39, the Indexes of Employment are on a 1949 base. Business must, therefore, refigure the former Indexes to a 1949 base before attempting to make even rough comparisons between the two series.

Still another apparent fault is the disposition of Ottawa to draw conclusions — usually rosy ones — from its statistics. When the new format for the Canadian Statistical Review was submitted to some of us for comment before final adoption, it was pointed out that while readability — a most important consideration — would be vastly improved, a dangerous element would be introduced in having official editorial comment upon the official figures. It was contended that a government should confine its activities to the collection, collation and dissemination of statistics, and should leave comment upon them to others not employed by the State. Otherwise, it was anticipated that the Statistical Review would take on the flavour of a service club member's speech before his local Chamber of Commerce.

Events since the Statistical Review first made its appearance in the new format have done nothing to invalidate fears of those who hold that official figures should be issued without government officials publicly drawing conclusions from them. Moreover, the D.B.S. Daily Bulletin not only constantly offends by its hip-hip-hurrah approach, but it now periodically has attached to it brightly written editorial "fillers" calculated to make us all feel just as happy as kings.

Both the Statistical Review and the Daily Bulletin sometimes seem to omit comparisons when such might make our present seem less rosy than our past. All through the boom year 1955, the figures were compared with the recession year 1954, and seldom if ever with the boom year 1953. Consequently, anybody relying only upon the official figures, and official comment thereon, would seldom have become aware of the fact that on a constant dollar per capita basis, 1955 was, in fact, a poorer year in several directions than 1953.

If the figures were always issued for five consecutive years without official comment, but in both current and constant dollars, the lot of many a harassed businessman would be greatly eased. It should not be forgotten in this connection that that same harassed businessman finds the taxes out of which the D.B.S. draws a considerable part of its sustenance.

Some businessmen of suspicious mind also claim that statistics have sometimes been issued not solely with reference to the calendar, but also with an eye to their political effect. Such procedure would, of course, be quite consistent with the efforts of public officials to draw from official statistics the brightest possible picture as to the functioning of our economy.

G.N.P. Conceals Callipygian Curves

So much for the manner in which our official statistics are published. Let us now look for a moment at one of the most important of those statistics — the national accounts. Today, practically everything our government does hangs in some degree upon the national accounts; and particularly upon estimates of the current dollar value of the so-called "Gross National Product."

At the risk of appearing pedantic, I quote the salient parts of the official description of our Gross National Product:

"This aggregate measures the value of goods and services produced by Canadian residents in a given period (a year) by adding together all costs arising in production. For the economy as a whole, these costs consist first of factor costs, that is to say, the earnings of the factors of production employed: wages and salaries, investment income including

corporation profits before taxes, and net income of unincorporated business. The sum of these factor costs is the National Income. To arrive at the total which measures production at market prices it is necessary to add elements of market prices which do not represent incomes of factors of production, that is, depreciation allowances and similar business costs, and indirect taxes less subsidies. The total thus obtained is called the Gross National Product. . . . In order to arrive at an estimate of growth of real production, adjustment must be made for price changes. The estimates so adjusted are referred to as constant dollar series."

You will notice that the Gross National Product includes both indirect taxes and depreciation allowances and other business costs. The latter item includes undistributed corporate profits. Taken together, in 1955 indirect taxes and depreciation allowances and other business costs constituted more than 20 percent of the constant (1949) dollar value of our Gross National Product per capita.

Plainly, neither would have come into existence except as a function of the national production. But does not their presence in the G.N.P. figures lead to the upbuilding of a somewhat misleading picture as far as the layman is concerned?

When Canadians and their representatives in Parliament use the Gross National Product as a measure of our progress and prosperity, do they not think of it in terms of goods and services produced rather than as a catch-all which includes certain types of taxes and retained earnings? Isn't there perhaps something just a trifle unrealistic, then, in using G.N.P. figures to so great an extent as at present in trying to measure our real economic progress?

Unfortunately, as far as I am concerned, those must remain largely rhetorical questions, because it must be confessed that no one has as yet produced what appeals to me as being any very practical alternative means of economic measurement.

Nevertheless, they are questions which must, I think, trouble all those whose job it is to try to ensure that we shall do the right thing at the right time in so many different and important fields of activity.

Personally, I incline to the view that perhaps the best measure of national progress from one year to another is Personal Disposable Income on a constant dollar basis per capita. After all, no matter how hard you try to rationalize it away, there is no substitute for real income in the hands of the people who produced it as an indicator of the economic health of a national economy.

Electric Storm

Clarence L. Barber

In our Winter 1955 issue, Professor H. E. English of Carleton College criticized the "Knox Report", suggesting that the authors had "accepted the counsel of despair put forward by the manufacturers' association."

Here Professor Barber of the University of Manitoba, one of its authors, jumps to the defence of the Knox report, expressing his own views, not necessarily those of its other two co-authors. Among our "Letters to the Editor", Professor English gives a further riposte.

THE suggestion that the authors of the Knox Report, having accepted payment from the producers of electrical goods, deliberately de-emphasized certain data and omitted other facts that would be unfavourable to their clients is only thinly veiled. These are serious charges. One would expect to find them supported by a careful and objective examination of the report. But what do we find instead: a failure even to mention or discuss the report's principal conclusions: one sentence quoted out of context which gives the report a protectionist twist; criticism centred mainly on points that were somewhat marginal to the report's terms of reference; and a general failure to provide an accurate picture of what the report did say. This does not mean that the report is above criticism. Some of Mr. English's points are valid and such criticism is welcomed. But it is rather difficult to "explain certain omissions and de-emphases" in Mr. English's review.

Readers of that review must have formed the impression that the "Knox Report" was a highly protectionist tract. And yet its principal recommendation was that the government should continue its postwar policy of gradual tariff reductions in the interests of greater efficiency. This recommendation was qualified by the suggestion that the government should go slow with tariff reductions where particular industries or areas were facing difficulty in adjusting to increased import competition. At the time the report was being written it was judged that these adjustment difficulties were sufficiently severe in the electrical manufacturing industry as to make unwise any general tariff reductions for the time being though specific reductions might still be justified in areas where these difficulties were not present. What then is the basis of

Mr. English's contention that we "consider the present structure of industry must be maintained at any cost"? Why did he choose to ignore entirely the report's principal recommendations? Was it because these recommendations conflicted with many of the criticisms he wished to make?

Mr. English also criticizes the report for treating the devaluations of 1949 as though they were a purely temporary phenomenon like the competitive devaluations of the inter-war period. This charge is nothing but a figment of Mr. English's imagination. There is nothing in the report that suggests we regarded them as anything other than a part of a long run adjustment to the changed structural circumstances of the European economy. The statement that they simply reflected a change in the overall productivity of the British economy is, of course, pure nonsense. As is the suggestion that the devaluation provided "no competitive advantage in most lines". No one with any knowledge of recent developments in the heavy electrical industry would think of making such a statement, as Mr. English could easily verify. To sum up his discussion of devaluation Mr. English quotes from the report as follows: "There is certainly no case for any further reduction of the very moderate degree of tariff protection now enjoyed by the industry in the face of the competitive advantages which the depreciations of 1949 still afford the overseas manufacturers". But in the original text this sentence was introduced by a phrase "In the meantime", which clearly referred to a preceding statement which might be paraphrased "until the consequences of the recent trend towards increased imports becomes clearer". Thus Mr. English manages to twist an argument that we should wait and see before embarking on further tariff reductions into a general argument against further tariff reductions at any time in the future. At the best this is gross carelessness, at the worst it is just dishonest.

Mr. English criticizes our failure to treat the structure of the industry more fully and devotes a major portion of his discussion to some highly conjectural views of his own about the structure of the industry and the part the tariff played in fostering this structure. But thise whole discussion is completely irrelevant to the problem the Knox report was asked to deal with, as Mr. English would have realized if he had paid a little more attention to the terms of reference which were clearly set out in the preface to the report. In fact, I can see nothing inconsistent between Mr. English's views on structure and the analysis and conclusions of the Knox report.

Mr. English also makes a great fuss about the high profit level in the electrical manufacturing industry and claims that we were unable to explain it. I was not aware that any attempt had been made to minimize the fact that the industry had been extremely profitable and I would

have thought the reason for it was entirely obvious. Throughout much of the postwar period the industry has not only enjoyed extremely rapid growth but it has also had to an unusual degree a protected position in the Canadian market. Are these circumstances not entirely adequate to explain the favourable profit levels? It is also clear that since 1953 the profit position in some important sectors of the industry has deteriorated rather sharply. Even in 1955, a year of generally buoyant profit levels, the rate of return in one of the major companies showed a further decline and in another remained at the same level as in the previous year. This result accords well with the prediction made in the Knox report that the lower prices at which long term contracts on heavy apparatus were being taken in 1953 and 1954 would not affect profit levels until a year or two later.[1]

When an economic report is sponsored and published by an industry it is only natural for economists to examine it closely for signs of bias and special pleading. If there is such a bias in the Knox report it was certainly not intentional. And it will take more than the hasty generalizations and flimsy logic of Mr. English to convince anyone that such a bias exists.

1. Why Mr. English chooses to characterize "profits per dollar of sales" as meaningless is a mystery to me. The rate of return on the book value of capital and surplus is a far from unambiguous measure of profitability and after a period of inflation the profit sales ratio may be a preferable measure for some purposes such as an indication of the relative profit rate over time. It is true that the profit sales ratio is not a valid measure for comparing profit rates between industries where the sales capital ratio differs significantly, but this is not a reason for rejecting it for all uses.

Canadian Investment in U.S. Firms Operating In Canada

The following table, based on Bank of Canada statistics, shows Canadian Minority Participation in Common Stock Equity of United States Direct Investment in Canada, 1953.

	50+%	*25-49%*	*1-24%*	*0%*	*Total*
Manufacturing	4	7	14	75	100
Mining	1	14	14	71	100
Utilities	6	5	14	75	100
Merchandising	3	8	12	77	100
Financial Enterprises	—	3	9	88	100
Other	3	6	16	75	100
Total	3	7	14	76	100

What the R.C. Church Can Teach Management

1. The value of widespread diversification to a continuing enterprise.
2. The necessity of autonomous controls geographically.
3. The benefit of long executive training and slow promotion.
4. The importance of doctrine and indoctrination in assuring continued unity of thought and action after the authority for decentralized operations has been delegated.
5. The necessity of giving top men full authority once they have been chosen.
6. The efficacy of being absolutely certain concerning each individual's integrity, ability, and industry before he is given any authority whatsoever.
7. The benefit of promtion from the ranks.
8. The wisdom of not too much obvious zeal once a position of influence has been attained.
9. The beneficial result of not too frequent reports to headquarters.
10. The advantage of haste in some directions and delay in others.
11. The requirement of constantly defensive action where authority is imperiled.
12. The need to utilize the knowledge and power of elderly men in staff capacities.
13. The advantages of an atmosphere of diplomacy in all dealings.
14. The wisdom of relieving incompetent executives of their authority.
15. The usefulness of fixed policies understood by and adhered to by everybody.
16. The importance of being slow to praise, and slower still to condemn.
17. The long-term benefit of avoiding nepotism in the hierarchy of any management.
18. The value of instilling all employees with a sense of public contribution and social values.
19. The advantage of realizing that monetary reward by itself has never been a great motivating force for man's best activities.
20. The need to abandon activities that have lost their usefulness.
21. The benefit of choosing directors that can be utilized in some manner at advisory level through their knowledge of the operation.
22. The importance of striving constantly to maintain unity of command.
23. The advantage of activities within all national boundaries, to the extent possible.
24. The wisdom of publicly honoring past contributors to the undertaking.
25. Never rob Peter to pay Paul, or do not lose the returns on one activity to support the production and distribution of another.
26. The need to recognize the advantages of simple beginnings in any new enterprise.
27. The profit from the starting of an enterprise at a time of adverse conditions.
28. The importance of being willing to deviate from fixed rules when intelligent management deems such action advisable.
29. The need to maintain at all times strict discipline and an atmosphere of some struggle and humility.
30. The everlasting advantage of advancing and denying at times, while retreating and affirming at others.
31. The importance of being amenable to constructive criticism.
32. The long-term importance of selling or persuasion by demonstration and example rather than by aggressive pressure.

—*Conclusions of the Management Audit of the Roman Catholic Church by the American Institute of Management.*

In Defence of the Canadian Consumer

Stefan Stykolt

In the five months from May 16 to October 17, 1955, the Restrictive Trade Practices Commission published no less than three reports: Report Concerning An Alleged Combine in the Manufacture, Distribution and Sale of Beer in Canada (hereafter cited as the Beer Report); Report Concerning An Alleged Combine in the Manufacture and Sale of Asphalt and Tar Roofings and Related Products in Canada (hereafter cited as the Asphalt Roofing Report); Report Concerning a Manufacturer's Advertising Plan Alleged to Constitute Resale Price Maintenance in the Distribution and Sale of Certain Household Appliances (hereafter cited as the Household Appliances Report). For five years, from 1933 to 1938, no reports appeared at all. The recent crescendo of anti-combines activity makes it desirable to review the Commission's recent reports, and this, economist Stykolt does in the following article.

THE *Beer Report,* first in this series, is of unusual interest because it deals with a dominant firm, and not with a price-fixing agreement among oligopolists.[1] Reports of activities of dominant firms have been relatively rare, and this one is the first to be published by the Commission under the Combines Investigation Act of 1952.[2] Interest is heightened by the increased vigour with which the Commission uses the economist's concepts in analyzing the implications for the public interest of the evidence before it.

In an attempt to determine the amount of market power at the disposal of Canadian Breweries Limited and of its associate, Western Canada Breweries Limited, the Commission considers such aspects of market structure as the percentage of capacity, production and sales, accounted for by the dominant firm and by its competitors in the regional markets and in the country as a whole (46-50). However, there is no discussion of substitutes (home-brew, soft drinks, etc.), imports, and

1) For an excellent analysis of problems of policy toward the dominant firm, on which much of what follows is based, see Carl Kaysen, *United States v. United Shoe Machinery Corporation, An Economic Analysis of an Anti-Trust Case,* unpublished Ph.D. Dissertation, Harvard, 1954.

2) The only other recent report concerned with the activities of the dominant firm appeared in 1949; see Department of Justice, *Investigation into an Alleged Combine in the Manufacture, Distribution and Sale of Matches, Report of Commissioner,* Ottawa, 1949.

interprovincial trade, all of them relevant to the question of market power. Although the Commission examines in detail the elimination of existing rivals by the dominant firm, little is said about the power to exclude potential entrants, despite the fact that the Commission explicitly recognizes free entry as one of the important attributes of market structure that limit market power, and despite the fact that provincial regulation of the distribution of beer, to which a good deal of attention is devoted, has a direct bearing on this question. The Commission's conclusion that

> ". . . the drastic reduction in the number of companies, to a mere two or three competitors, now deprives the public of the beneficial effects which might formerly be expected to flow from the truly competitive activities of the larger number of manufacturers then in business (85)."

is based on an assertion and not on an analysis of the relation between the market power of the largest firm on the one hand and the size and number of its competitors on the other. The Commission's misgivings about the small number of competitors do not appear to be serious. For, after this somewhat cursory study of the market structure, the Commission concludes that *the amount of market power* which the dominant firm possesses currently does not injure public interest either in the regional markets or in the country as a whole (90-97, 102).

However, the Commission opines that the dominant firm's behaviour has resulted in *market performance* which the Commission finds unsatisfactory by the criteria of "intent", and of satisfaction of the diversity of consumers' tastes. The Commission's conviction that the aim of Canadian Breweries Limited was to monopolize the beer trade is stated as follows:

> ". . . the mergers under examination here . . . must be judged in relation to the intent and purpose of Canadian Breweries in bringing them about. The evidence on record here tends to indicate that, even in the cases where the merger brought actual benefit to Canadian Breweries, in terms of available plant, equipment and other facilities, as well as know-how, the prime intent was to make sure that the competitor would be out of the way in the future (80)."

While the report contains abundant evidence of just such intent, its effect on the performance of the beer market is not examined. It would be interesting to know whether changes in the technology of beer production and transportation in the last thirty years have increased the optimum size of a brewery. Injury to the competitors of Canadian Breweries caused injury to competition only if the optimum size of a brewery did not increase.

The other criterion by which the performance of the market is adjudged inadequate, as a consequence of the activities of the dominant firm, is the satisfaction of the variety of consumers' tastes. The Commission puts this point thus:

> In substance, it is the opinion of the Commission . . .
> (iv) That, as a result of the activities disclosed in this enquiry, the public has been and still is deprived of the opportunity to choose from a wide and diversified range of brands, types and qualities of beer, the number of brands acquired in Ontario having been reduced deliberately by the Company from some 150 to 9 only; . . . (101-102)

In the words of the poet:

> "Malt does more than Milton can
> To justify God's way to man"

and it is hard to quarrel with the Commission's conclusion that the greater the variety of ways in which the malt is brewed, the more thorough is the justification to men whose tastes differ. But the question "how much variety and at what price?" is not answered; it is not even asked. Were the 150 brands, when they existed, simultaneous choices open to all the inhabitants of the Province of Ontario, or was the number available in most localities considerably less than that? Was the reduction in the number of brands accompanied by a change in the cost and in the price per bottle? If so, is there any way of indicating whether the consumers found themselves better off, worse off, or indifferent to the twin effects of a reduction in variety and a change in price? Before one can make up one's mind about the market's performance as judged by the number of brands, answers to these questions, no matter how tentative, must be given.

The Commission's finding that the present amount of market power exercised by the dominant firm does not injure public interest, but that the behaviour of the firm does result in poor market performance, leads to three recommendations. Canadian Breweries ought to be prevented from

> expanding further by acquiring, directly or indirectly, either the assets or the controlling interest in the capital stock of any of its competitors in Canada; . . . (103).

Secondly, the ties of ownership between Canadian Breweries Limited and Western Canada Breweries are not to be strengthened, and the ties of managerial control are to be dissolved. Finally, Canadian Breweries and its directors and officers are to be enjoined from entering into price-fixing agreements with other breweries in the future.[3]

3) It is difficult to see the sense of the second recommendation, since Canadian Breweries and Western Canada Breweries sell in geographically separate markets and, therefore, are not in competition with one another.

The first of these recommendations deserves a word of comment. It is not designed to impede the dominant firm's efforts to increase its share of the market by expansion rather than by acquisition. The Commission says as much on page 97. This permissive attitude seems to imply a favourable judgment of the dominant firm's performance in such matters as cost-price and output-capacity relationships, research activities, technological progressiveness, economies of large-scale production, etc., although there is no evidence in the report that these matters have been studied.[4] If this judgment is well founded in fact, then it is hard to see why "intent" and the somewhat naive opinion about the insufficient variety of brands should become the grounds of a recommendation that may well result in a court order. Such an order would lower appreciably the acquisition price of existing breweries to Molson's and Labatt's, Canadian Breweries' most important rivals, by removing the largest buyer from the market. Incidentally, it would affect adversely the value of the assets belonging to entirely innocent parties, to wit, the small independent brewers. On the other hand, if the performance of Canadian Breweries is unsatisfactory when judged by a set of realistic criteria, it is not clear why the company should be allowed to expand at all, and, in fact, why it should be permitted to stay as large as it is. One can only hope that these and similar issues will be raised at a later stage of the proceedings in this case, though it is difficult to believe that they will.

Collusion and Price-Fixing Among Oligopolists

The *Asphalt Roofing Report* belongs to the tradition of our combines policy since it describes and evaluates collusion among oligopolists. The Commission took seriously its duty to appraise the effects on the public interest of the operations of an open price association of manufacturers of asphalt roofing materials. A whole chapter is devoted to this purpose and, more gratifying than the amount of space, is the substitution of Harvard economists for learned justices as the authorities for the Commission's conclusions. These are that the open price association in the asphalt roofing industry is contrary to the public interest principally

4) Here, for instance, is the Commission's opinion of the quality of the products of Canadian Breweries:

> We should not, however, be understood to imply that the quality of the products presently offered to the trade by this Company are inferior in any respect. The evidence is all to the contrary and we are satisfied that every effort is made to ensure that the brands which it still produces and offers to the public are of the highest possible quality (87).

Similarly, the Commission's opinion of the price policy of the dominant firm appears inconclusive, at worst:

> As far as prices are concerned, it does not appear from the foregoing examples, that Canadian Breweries has, in fact, exercised on the market a definite influence in any particular direction (84).

because, with a few sporadic exceptions, it has resulted in identical prices for similar roofing materials when sold to the same buyers (238-72).

The *Report* suffers from two defects that detract from its educational and prescriptive value. It is unreadable and unclear. The bulk of the *Report,* some two hundred pages (31-238), cites with endless repetition, written and oral evidence of collusion in setting a variety of terms of sale. A mass of snippets of letters, minutes, questionings and quite unintelligible notes, taken by members in the course of meetings of the association, does not publicize; it conceals. Any reader, no matter how interested in combines policy in general, or in its application to the asphalt roofing industry in particular, may be forgiven if, having reached page sixty, he puts the *Asphalt Roofing Report* aside, not to take it up again. If he absolutely must know what the Commission thought of the practices in this market, he will turn directly to page 239, without missing much that is of value. Such observations, either by the Commission or by the Director of Investigation and Research, as are to be found in the body of the *Report,* easily escape the attention of a mind dulled by exposure to a mass of repetitive trivia. Since a wide readership is necessary if the *Report* is to have an effect, to have made it unreadable is to have made it ineffective.

The impression which the organization and emphasis of the *Report* are likely to leave, even with a patient reader, is misleading. He will close the *Report* convinced that the Commission found the open price association to be against the public interest because agreements concluded with the association's assistance have resulted in *uniform* prices, terms of sale, qualities of products, product lines, etc. If his interest is purely academic he will infer that these uniformities are undesirable, without quite knowing why. If he is more immediately concerned with the question of collusive behaviour, he will conclude that written agreements are dangerous if you get caught. As for the uniformities, nothing in the *Report* demonstrates that they are symptoms of economic waste. And yet they are, as the Commission hints on occasion (e.g., 249, 257). The waste is caused by three kinds of systematic and collective price discrimination: between localities, between products, and between classes of buyers. Geographic discrimination results from the use of a basing point system for the computation of freight charges, since some buyers do not pay the full cost of transport of the goods they buy in cases where sellers absorb part of the cost, while others pay more than the full cost in cases where phantom freight is added to the actual transport charges (124, 129). Aside from this distortion, cross-freighting, which is a likely result of "freight equalization", is also wasteful. Discrimination between products arises from differences in elasticities of demand. Price policies with respect to asphalt roofing products for which there are close substitutes (made out of wood or metal, or imported from the United States) were designed

to meet this competition and, by implication, policies with reference to products for which such substitutes did not exist, were not (80, 159, 257). Discrimination between buyers occurred as a consequence of a system of aggregated rebates and of classification of buyers. The essence of the former the Commission describes thus:

> The general basis of the quantity rebates has been that they were dependant upon the total amount of purchases of Canadian products by a single buyer regardless of the number of sources of supply from which purchases might be made in any given period (102).[5]

The classification of buyers (wholesalers, public bodies, etc.), as opposed to aggregated rebates, made possible a discriminatory scale of discounts (102, 190-91).

The operation of the basing point system, of the system of aggregated rebates, and of the classification of buyers' discounts destroyed in some measure the correspondence between the terms on which buyers could acquire the various asphalt roofing products and the costs of supplying them. There lies the injury to the public interest. Most of the harm would remain even if members of the industry were to practice systematic price discrimination independently. The *Report* never makes this point clear, and contains recommendations which make one wonder whether the Commission has grasped its full significance. Would an order requiring the manufacturers to resort to non-discriminatory f.o.b. pricing, coupled perhaps with some adjustments in the tariff, not serve the Commission's purpose better than

> . . . a judicial restraining order which would forbid those practices and agreements which have been so effective in maintaining a uniform price structure in the asphalt roofing industry, or other practices and arrangements among the manufacturers which would produce or be likely to produce the same result (272)?

Advertising and Retail Price Maintenance

The *Household Appliances Report* describes the efforts exerted by a manufacturer of electric refrigerators, stoves and similar durable goods, to induce the retailer to advertise his wares at prices set by himself. To ensure the cooperation of dealers, the manufacturer subsidized those advertisements that mentioned prices of which he approved and, usually, refused to subsidize those that did not. The Commission has found this practice to be against the public interest, though it admits that this find-

5) In addition to being discriminatory, the practice of aggregating rebates results in a strong pressure on new entrants to join the association.

ing may, "at first sight, . . . put a manufacturer desirous of promoting the sale of his product through cooperative advertising in an unexpected quandary."

> If a manufacturer is to make an allowance toward the cost of an advertisement he will naturally feel that he should contribute only to an advertisement that, in his opinion, will be to the advantage of his business and that he should be able to withhold payment toward the cost of any advertisement which he considers would be detrimental to his business (91-2).

In spite of this very convincing reasoning, the Commission concludes that a manufacturer who exercises his judgment in the matter of advertisements which he will subsidize, who exhorts his dealers at meetings to follow a common advertising policy, etc., acts in a manner contrary to the principles of the legislation against resale price maintenance.

When translated into the economic sphere, the legal principle that *de minimis non curat lex* means that an undesirable practice has no significance if the firm which indulges in it does not possess any market power. This is evidently the case of the manufacturer with whom this *Report* is concerned. The *Report* is full of evidence of price cutting (31 and following pages) and of competition from discount houses (41, for instance). Were the resources of the Combines Branch and of the Commission used effectively when they were applied to this investigation? There are no recommendations for remedies. Does the Commission feel that none are necessary? If so, then, the only purpose of the *Report*, and of such proceedings as may be taken subsequently, is to discourage others by "making an example" of the investigated manufacturer. Aside from any repugnance which the principle of exemplary punishment may inspire, the object lesson would have been more convincing if it had dealt with a more powerful culprit.

Conclusions

The three Reports are a testimony to the Commission's vigilance and diligence, for which all those who are interested in the protection of competition in Canada must be grateful. They illustrate the Commission's growing concern with the appraisal of the economic effect on the public interest of restrictive trade practices, and with the formulation of remedies. At the same time, they reveal the difficulties which the Commission encounters in applying economic analysis to the tasks of evaluation and reconstruction, in presenting readable and effective reports, and in using its resources efficiently.

The Growth of Canada's Largest Public Companies in Manufacturing and Transport

This table is based on original research at the University of Western Ontario School of Business Administration into published sources.

Company	*Assets ($ Millions)*		*Percentage Growth Since*
	1954	*1945*	*1945*
Canadian Pacific Railway	$1,476.7	$1,324.4	11.5
Aluminium Ltd.	847.9	255.8	231.5
Aluminum Co. of Canada Ltd.	640.9	193.8	230.7
Imperial Oil Ltd.	588.8	186.9	215.0
Distillers Corp.—Seagrams Ltd.	473.9	190.9	148.2
International Petroleum Co. Ltd.	285.1	152.2	87.3
The British American Oil Co.[1]	243.4	50.4	382.9
Massey-Harris-Ferguson Ltd.[2]	198.9	49.4	302.6
Hiram Walker, Gooderham and Worts Ltd.	198.2	110.5	79.4
The Steel Company of Canada Ltd.	175.6	65.9	166.5
Abitibi Power and Paper Co. Ltd.	156.8	123.4	27.1
Ford Motor Co. of Canada Ltd.	155.0	58.3	165.9
Canadian Chemical and Cellulose Co. Ltd.[3]	145.9		
Imperial Tobacco Co. of Canada Ltd.	132.9	86.7	53.3
MacMillan and Bloedel Ltd.[4]	126.5		
Canadian General Electric Co. Ltd.	114.8	41.8	174.6
Dominion Steel & Coal Corp. Ltd.	113.5	60.1	88.9
Canadian Industries (1954) Ltd.[5]	108.5	57.1	90.0
Consolidated Paper Corp. Ltd.	106.4	61.1	74.1
Canadian Breweries Ltd.	104.5	36.6	185.5
Algoma Steel Corp. Ltd.	98.6		
Price Brothers and Co. Ltd.	97.8	57.7	69.5
McColl Frontenac Oil Co. Ltd.	90.8	53.0	71.3
Howard Smith Paper Mills Ltd.	78.6		
Bowaters Newfoundland Pulp & Paper Mills Ltd.	75.5	49.4	52.8

[1]American subsidiaries not consolidated in statement until 1948.

[2]In 1953, amalgamation of Massey Harris Co. Ltd. and the Harry Ferguson Companies was effected.

[3]Organized in 1951 by Celanese Corporation of America.

[4]In 1951 H. R. MacMillan Export Co. Ltd. merged with Bloedel, Stewart and Welch Ltd. to form MacMillan & Bloedel Ltd.

[5]Company name changed from Canadian Industries Limited effective July 1, 1954 when company was split. Other new company Du Pont of Canada Securities Limited.

Canadian Corporation Financing 1947-1953

Frances Oxley

Large Canadian corporations financed their operations during the years 1947 to 1953 chiefly through the use of funds obtained from current operations. They were able to cover all investments in plant, property and equipment, all net working capital requirements and a major portion of dividend payments with the money supplied by net income and depreciation.

The additional money that was needed was obtained mostly from long-term debt with a relatively smaller proportion coming from stock issues. As a result debt-equity ratios rose for all large corporations during this period but to a greater degree for those with assets valued at $5 to $25 million than for those with assets over $25 million.

There is some indication that dividend appropriations decreased in relative size during the period. However, the evidence on this point is highly inconclusive. It does seem, however, that the stockholders in the largest companies, i.e. those with assets over $25 million did not benefit to as great a degree from the post-war prosperity as the stockholders in the smaller companies, i.e. those with assets valued at $5 to $25 million.

A study of ten individual companies indicated that these general trends existed to some degree in most of them. However, the relationship between asset size and methods of financing appeared somewhat tenuous. Factors other than size no doubt exert a large influence on the financial operations and results of corporations.

Part I

Truly reliable statistics illustrating the trends of all corporation financing in the post-war Canadian economy are not available. However, a series published by the Bank of Canada Statistical Summary in November, 1954, and entitled "Corporate Financial Statistics: 1947-1953"[1] does provide a basis for the analysis of the financial operations

[1]p. 255. The breakdown of the data into asset size groups was not published in the Summary but was kindly supplied by the Research Department of the Bank of Canada.

of large corporations, i.e. those corporations with total assets valued at $5 million and over.

In 1953 the 704 corporations included in the study represented only 2.1% of the total number of corporations operating in Canada, although they produced 47.7% of all profits before taxes.[2] The two largest asset size groups in the study represented, however, a much more significant proportion of their own totals and the data pertaining to them can be used with a fair degree of confidence. For example, the 69 companies with assets over $25 million included 35.3% of the total Canadian organizations of similar size and produced 73.8% of the profits before taxes, while those with assets from $5 to $25 million (159 corporations) included 25.1% of the total companies of this size and produced 57.8% of the profits before taxes.

The analysis is centered on these two groups of companies and in order to facilitate the discussion those with assets over $25 million are referred to as Group I, while those with assets from $5 to $25 million are referred to as Group II.

The financial operations of all individual corporations which fall into these two large assets classifications have also been studied and where possible comparisons with the total picture are made. These companies were chosen on purely practical grounds with the availability of adequate data being the major consideration. The analysis is presented in Part II of the discussion.

Significance of Funds From Current Operations

A major portion of all funds available to the corporations came from current operating funds. In order to arrive at the total money available from this source, depreciation allowances were added back to operating profits from which income taxes had been deducted. Thus, net income to stockholders plus depreciation reserves were the largest components of current operating funds and represented the total amount of money produced by actual operations and available to the companies.

Depreciation reserves were a very important component of total funds. At no time did they constitute less than 15% and during the 1950's the proportions rose to approximately 25% or nearly one-quarter of all money available to the corporations.

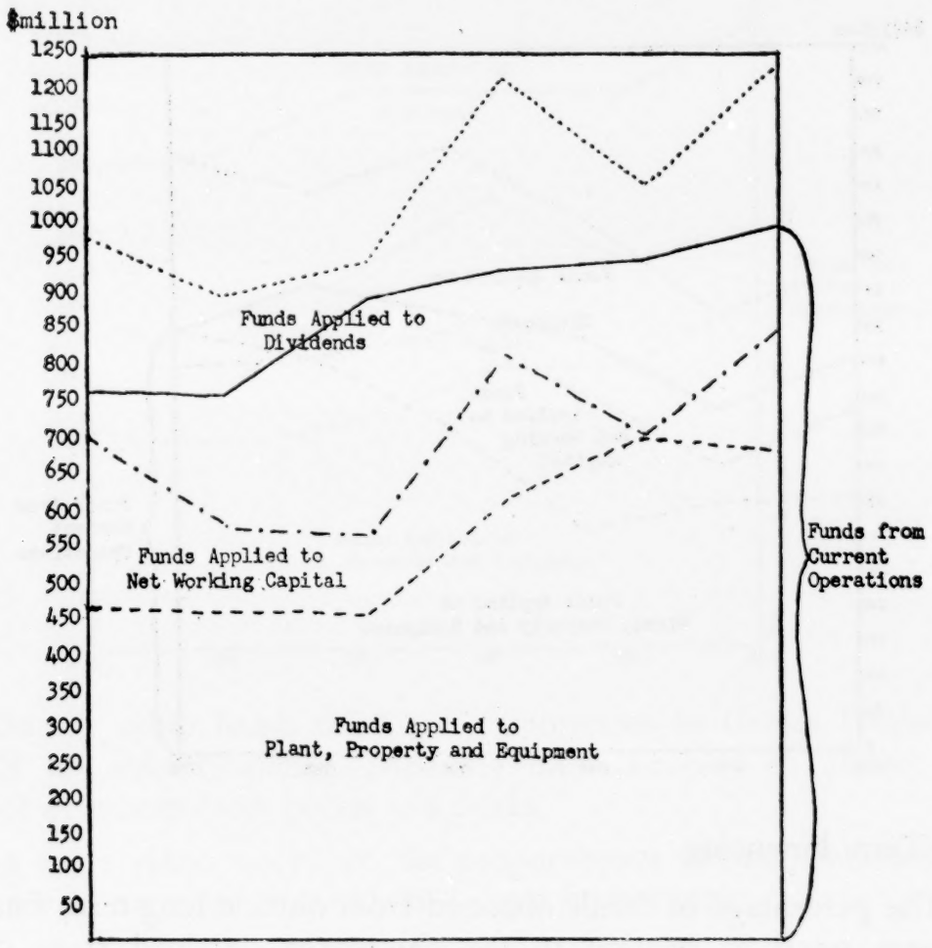
As shown in Chart 1, funds from current operations were of an amount large enough to cover all capital investment, all net working

[2]Data on total corporations in Canada were obtained from "Taxation Statistics, 1955", Table 8, p. 153, published by the *Department of National Revenue.*

Chart 1 — A Comparison of Total Funds from Current Operations and New Borrowing and Their Application

Total — 704 Companies

1948 - 1953



capital requirements and approximately half of all dividend payments. In fact, in 1949, 1950 and 1953 they covered over half of the latter.

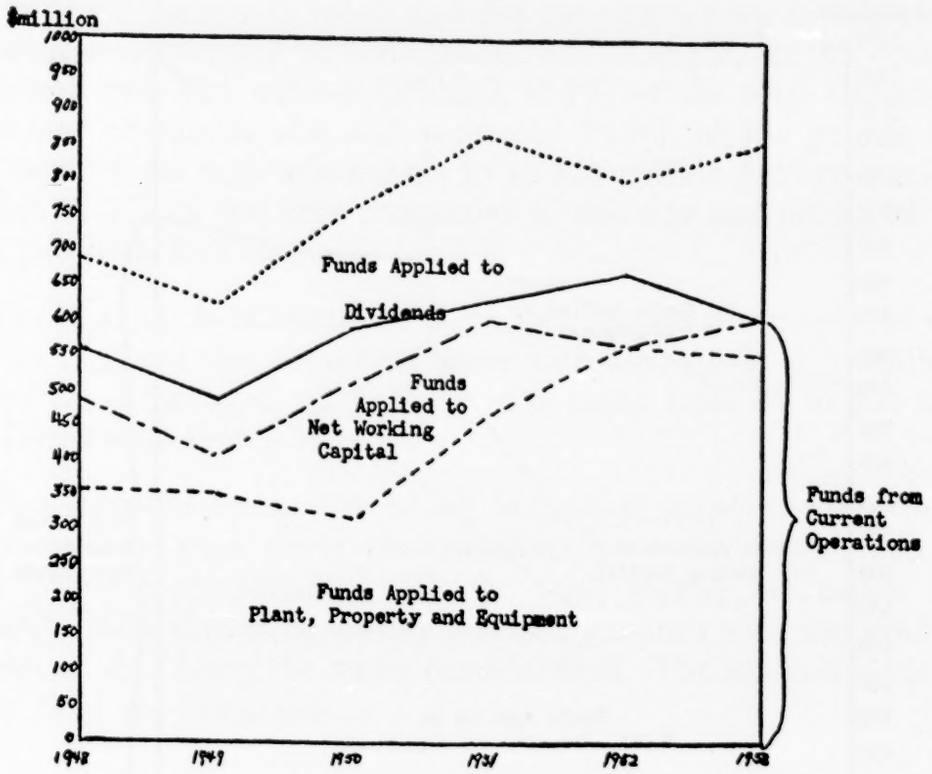
This ability of the 704 companies to cover nearly all fund requirements with money obtained from current operations is chiefly the result of the activities of the smaller companies in Group II. They were able to cover all capital equipment expenditures and net working capital requirements plus more than half of their dividend payments with these funds as shown in Chart 3.

The larger companies, on the other hand, were not able to cover dividend payments to as large an extent. Funds from current operations were not sufficiently great to cover more than one-third of these latter requirements plus all other major financial needs of the companies in Group II. This appears clearly in Chart 2.

Chart 2 — A Comparison of Total Funds from Current Operations and New Borrowing and Their Application

Group I — Companies with Assets Over $25 Million

1948 - 1953



Long-Term Financing

The percentage of funds obtained from outside long-term financing was very small in relation to the percentage obtained from current operations. For the 704 companies an average of 15.6% of the total money available came from the sales of stocks and bonds. (Table 1.)

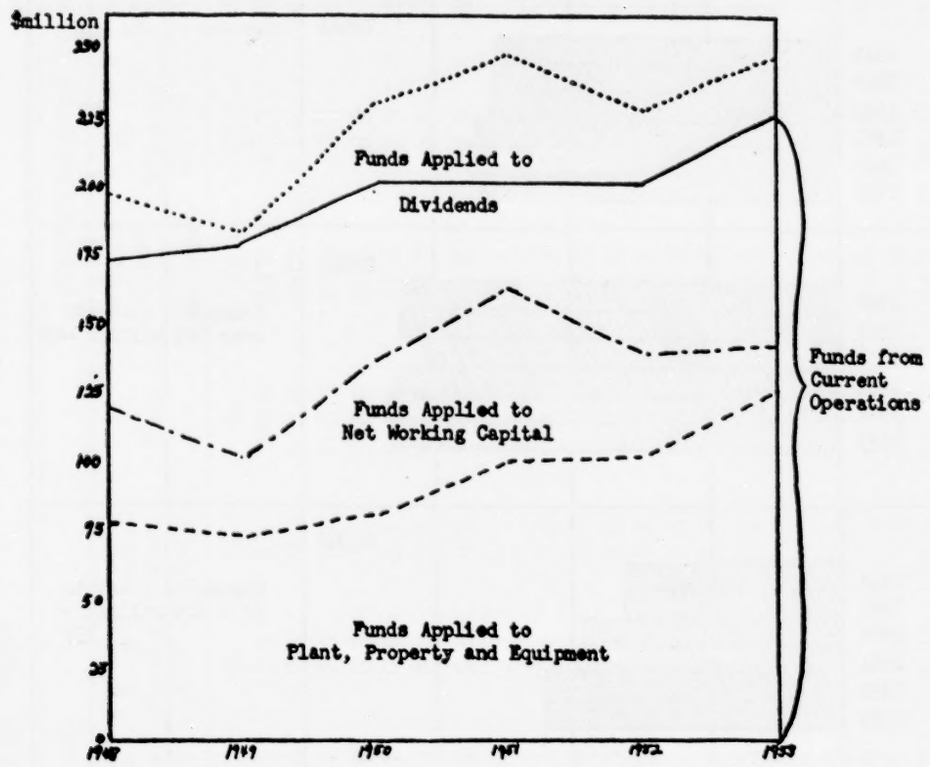
There was, however, a difference between the two groups of companies in the emphasis placed upon long-term financing. The average proportion of funds obtained from long-term financing decreased as asset size decreased with the result that the smaller companies relied less heavily on money from outside sources than did those with assets over $25 millions.

The largest share of the outside money was obtained from debt-financing and the smaller corporations included in Group II were outstanding in this respect. During the period they obtained nearly all of their outside funds from borrowings. Stock issues, both common and preferred, provided an almost negligible proportion of their total funds.

Chart 3 — A Comparison of Total Funds from Current Operations and New Borrowing and Their Application

Group II — Companies with Assets $5 to $25 Million

1948 - 1953



On the other hand, the large corporations in Group I relied less heavily on debt financing. Actually they obtained an almost equal amount of money from bonds and stocks.

In some years, moreover, the proportionate amount obtained from stock issues exceeded that obtained from borrowings.

Applications of Funds

Capital Expansion

For the 704 companies an average of 45% of all funds available during the period was devoted to the expansion of plant, property and equipment.

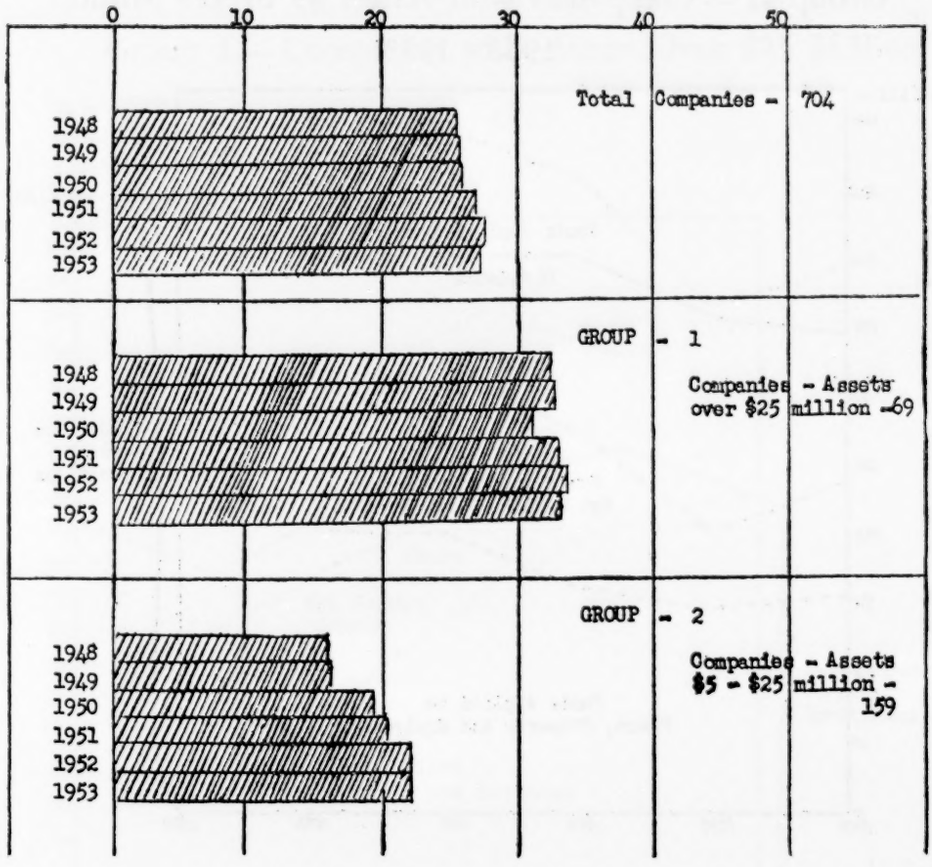
Investment for replacement and expansion appeared to be of greater concern to very large companies with the result that a proportionately larger amount of the total funds available to them was invested in plant, property and equipment than by the smaller ones.

Dividends

At the same time the larger companies paid out over the period a proportionately smaller amount of funds in dividends than did the com-

Chart 4 — Debt-Equity Ratios

1948 - 1953



panies with assets of $5 to $25 millions. Apparently, stockholders in these latter corporations were in a somewhat preferred position. An average of only 26.4% of the funds of Group I was turned over to stockholders while 31% of the funds of Group II was used in this manner.

The stockholders of the smaller companies also benefitted to a greater extent over the entire period as is shown in Table 2, where year to year percentage changes in the appropriations to dividends are given. The dividends paid out by companies in Group II increased by a greater percentage (48.7%) than did the dividends paid out by companies in Group I, where their total increased by only 8.8%. An allowance for the differences in base figures of the two groups does not change this conclusion which appears to result from the fact that in every year except 1949 the smaller corporations increased dividend payments by fairly large proportions. The large corporations in Group I, on the other hand, increased them by relatively small proportions and only during the period from 1948 to 1951. An actual decline in the total amount of dividend payments made by these companies occurred during 1952 and 1953.

TABLE 1—Sources and Applications of Funds, in Percentages

1948 - 1953

Classification and Year	Sources of Funds						Applications of Funds				
	Total	*From Current Operations*	*From Working Capital*	*From Other Assets*	*From Funded Debt*	*From Stock Issues*	*Total*	*To Plant Property and Equipment*	*To Working Capital*	*To Dividends*	*To Other Uses*
Total — 704 Companies	%	%	%	%	%	%	%	%	%	%	%
1948	100.0	72.3	7.4	2.5	13.8	5.1	100.0	44.0	27.5	28.1	1.3
1949	100.0	80.1	3.0	4.0	7.6	5.3	100.0	48.5	15.4	34.8	2.4
1950	100.0	66.7	18.1	2.7	7.4	5.1	100.0	33.5	38.8	28.3	5.0
1951	100.0	61.8	18.7	1.5	10.5	7.5	100.0	40.5	32.5	24.5	4.2
1952	100.0	68.8	15.1	.1	9.7	6.3	100.0	51.4	15.5	26.0	8.7
1953	100.0	78.7	5.2	.3	8.4	7.4	100.0	52.0	15.1	27.5	8.2
Average for Period	**100.0**	**71.4**	**11.3**	**1.8**	**9.5**	**6.1**	**100.0**	**45.0**	**24.1**	**28.2**	**5.0**
GROUP 1—Assets over $25 million.											
1948	100.0	67.2	62.2	3.2	17.6	5.8	100.0	47.4	24.4	27.2	1.0
1949	100.0	74.6	3.9	4.9	8.6	8.0	100.0	53.3	12.9	32.8	1.0
1950	100.0	65.1	16.7	3.3	5.9	9.0	100.0	35.8	36.9	26.5	.8
1951	100.0	58.5	18.1	.8	12.4	10.2	100.0	43.1	30.0	23.1	2.9
1952	100.0	63.9	18.6	....	9.8	7.6	100.0	54.8	15.2	23.9	12.4
1953	100.0	77.3	4.4	.3	10.5	9.5	100.0	54.5	14.8	25.3	5.4
Average for Period	**100.0**	**67.6**	**11.3**	**2.1**	**10.8**	**8.3**	**100.0**	**48.1**	**22.5**	**26.4**	**3.9**
GROUP 2—Assets $5-$25 million.											
1948	100.0	76.5	11.0	3.3	5.8	3.6	100.0	34.3	29.7	30.0	6.0
1949	100.0	87.0	3.6	4.6	4.7	.1	100.0	36.0	19.6	38.2	6.2
1950	100.0	60.7	21.9	5.6	11.6	.2	100.0	26.0	37.0	29.8	7.2
1951	100.0	65.0	20.5	4.7	8.1	1.7	100.0	34.2	38.4	26.1	1.3
1952	100.0	76.9	9.0	.4	11.7	2.0	100.0	42.1	19.6	29.0	9.3
1953	100.0	83.2	10.4	.4	5.8	.2	100.0	47.0	15.7	33.0	4.3
Average for Period	**100.0**	**74.9**	**12.7**	**3.2**	**7.9**	**1.3**	**100.0**	**36.6**	**26.7**	**31.0**	**5.3**

Working Capital

The fluctuations in the working capital accounts indicate that large increases in these funds as both a supply and a use occurred chiefly in the years of high activity, namely 1950 and 1951. In 1952 they fell somewhat and by 1953 were of relatively little importance.

Throughout the period the smaller companies in Group II operated to a slightly greater degree with working capital than did Group I. The former obtained 12.7% from and supplied 26.6% to working capital leaving a net application of other funds to this account which equalled 13.9%. On the other hand, Group I obtained 11.3% and applied 22.5% in the same manner with the result that only 11.2% in total was applied to the net working capital account.

Results of the Financing

Debt-Equity Ratios

The major result of the emphasis upon borrowing by the corporations consisted of increasing debt-equity ratios as shown in Chart 4. These ratios were calculated by comparing the average yearly values of long-term debt to the average yearly values of the outstanding stock of each group of companies.

The difference between the two asset-size groups lies in both the size of the ratios and the rate of increase. The ratios in the large companies were greater by an average of 14% for the period. On the other hand, the rate of increase in this ratio was slightly lower than it was for those with assets from $5 to $25 million. The ratios for Group I rose only 4% — from 31% to 35% — while for Group II they rose 6% — from 16% to 22% — with the major portion of this increase occurring after 1949.

Part II

In 1953 the individual companies under study belonged mostly to the group of large companies included in Group I, i.e. those with assets over $25 million. There were three, however, (Atlas Steels Ltd., the Asbestos Corporation Ltd. and Montreal Lomomotive Works Ltd.) that were of an assets size which placed them in Group II, i.e. those with assets from $5 to $25 millions.

The total asset values of each company in 1953 are shown below. The wide range from $733.5 million to $19.9 million provides an opportunity to compare the financing of very large and relatively small individual companies. However, it must be emphasized that the companies are in no way a representative group. They were chosen on the

basis of expediency and were analyzed because of the interesting aspects of financing which they demonstrated.

Name of Company	*Total Assets - 1953*
Aluminium Ltd.	$733.5 millions
The International Nickel Co. of Canada Ltd.	429.7 "
International Petroleum Co. Ltd.	262.0 "
Canada Packers Ltd.	85.3 "
Howard Smith Paper Mills Ltd.	74.6 "
General Steel Wares Ltd.	28.0 "
British Columbia Packers Ltd.	26.4 "
Atlas Steels Ltd.	21.8 "
Asbestos Corp. Ltd.	20.6 "
Montreal Locomotive Works Ltd.	19.9 "

Significance of Funds From Current Operations

The significance to the individual companies of funds from current operations varied greatly for the period 1948 to 1953 and appeared to have little or no relation to the asset size of the companies concerned. For some they provided more than enough money for all capital expansion, net working capital and dividend needs in most years, while for others they were not adequate at any time and had to be supplemented by funds from other sources. However, for all companies funds from current operations provided a very large proportion of all the money available.

Funds From Outside Long-Term Financing

To supplement the funds from current operations seven of the companies carried out long-term financing. There were three exceptions, however, the Asbestos Corporation, International Nickel Ltd., and Montreal Locomotive Works Ltd.

The extent to which the remaining seven companies relied upon outside financing differed considerably, as is shown in Table 3. The proportions ranged from 32.6% of total funds for Aluminium Ltd. to .1% for International Petroleum Ltd. The major portion of this outside financing consisted of borrowings.

Other Sources and Uses of Funds

In the preceding discussion the amount of funds supplied and used beyond the areas already examined was almost negligible. Much the same is true for the individual companies. However, there were some differences which should be noted. Eight of the companies used funds beyond those needed for capital expansion, net working capital and dividends to retire small amounts of outstanding debt. Also, seven of them made net investments in the securities of other companies. The

Asbestos Corporation is outstanding in this respect with 20% of its funds having been used chiefly to increase the holdings of the securities of other companies.

TABLE 2—Percentage Changes in Total Funds Applied to Dividends

1948 - 1953

Classification and Year	*Total Dividends (Millions of Dollars)*	*Percentage Changes*
Total — 704 Companies		
1948	300.7	
1949	334.1	+ 11.1
1950	385.6	+ 15.4
1951	374.5	+ 2.8
1952	360.5	— 3.8
1953	364.7	+ 1.2
Total		+ 21.1
Group 1 — Assets over $25 million		
1948	205.4	
1949	216.7	+ 5.5
1950	244.3	+ 12.7
1951	254.8	+ 4.2
1952	247.5	— 2.1
1953	241.4	— 11.5
Total		+ 8.8
Group 2 — Assets $5-$25 Million		
1948	68.8	
1949	79.8	+ 17.4
1950	99.1	+ 21.6
1951	83.1	— 15.1
1952	76.9	+ 7.5
1953	90.2	+ 17.3
Total		+ 48.7

Major Applications of Funds

For all but two of the companies the largest proportions of their funds were applied to plant, property and equipment. The amounts ranged from 55.4% for Aluminum Ltd. to 14.8% for Canada Packers Ltd.

The two companies which did not follow this pattern were International Nickel Ltd. and Montreal Locomotive Works Ltd. In both, the proportions applied to dividends were at least twice as great as those applied to capital expansion. International Nickel Ltd. paid out 40.3%, which was the greatest percentage of funds paid to stockholders by any of the companies under study. Among the other corporations the dividend applications varied greatly but ranged between 9% and 20%, proportions which were all below the averages of Groups I and II. British Columbia Packers Ltd. stood lower still with 6% of its funds being used in this manner.

Working Capital

The gross figures for working capital shown in Table 3 demonstrate that there was a very great difference among the companies in the extent to which they obtained funds from and applied funds to working capital. In two companies over 50% of all funds flowed through these accounts while in others the proportions ranged from 15% to 50%. Trade credit and liquid assets were heavily relied upon to build up inventories and other working capital needs. In fact, on the whole the latter demanded funds beyond those supplied by the working capital accounts, with the result that all but one company showed a net application to working capital.

Results of the Financing

Debt-Equity Ratios

Most of the corporations which engaged in long-term financing recorded increasing although fluctuating debt-equity ratios (Table 4). The small retirements of debt plus some increased stock issues accounted for the fluctuations. On the whole, however, the ratios followed the general trends discovered for Group I and Group II. However, the extremely high and rising debt-equity ratio of Aluminium Ltd. was outstanding during these years.

Conclusion

The study has demonstrated that funds from current operations were exceedingly important to all companies studied. Long-term debt was the chief source of supplemental funds. It has also shown that the

uses of the funds varied greatly. No two companies applied the money available to them in the same manner. In addition, the size of the corporation appeared to have little effect on the extent to which these events took place.

TABLE 3—Sources and Applications of Funds by Industrial Companies —Percentage Averages for Period, 1948 - 1953

Sources of Funds

	Total	*From Current Operations*	*From Working Capital*	*From Other Assets*	*From Funded Debt*	*From Stock Issues*
	%	%	%	%	%	%
Aluminium Ltd.	100.0	43.3	17.1	6.1	26.7	5.9
International Nickel Ltd.	100.0	73.1	15.6	11.3	....	....
International Petroleum Ltd.	100.0	66.0	28.9	4.9	....	.1
Canada Packers Ltd.	100.0	29.5	66.1	1.7	2.5	....
Howard Smith Paper Mills Ltd.	100.0	56.2	11.3	10.4	16.3	6.2
General Steel Wares Ltd.	100.0	43.1	24.3	14.9	17.5	....
British Columbia Packers Ltd.	100.0	37.7	46.0	4.3	11.9	....
Atlas Steels Ltd.	100.0	42.4	47.3	1.8	8.5	....
Asbestos Corp. Ltd.	100.0	79.0	19.1	1.8	....	....
Montreal Locomotive Works Ltd.	100.0	16.8	78.7	3.9	....	....

Applications of Funds

	Total	*To Plant Property and Equipment*	*To Working Capital*	*To Dividends*	*To Other Assets*	*To Other Uses*
	%	%	%	%	%	%
Aluminium Ltd.	100.0	55.4	26.1	10.8	3.1	3.9
International Nickel Ltd.	100.0	21.5	23.8	40.0	14.4	....
International Petroleum Ltd.	100.0	33.4	42.9	17.4	6.0	.1
Canada Packers Ltd.	100.0	14.8	65.5	9.6	3.8	6.0
Howard Smith Paper Mills Ltd.	100.0	39.4	21.7	9.1	20.2	9.6
General Steel Wares Ltd.	100.0	20.5	38.1	18.1	17.2	6.0
British Columbia Packers Ltd.	100.0	19.3	65.2	6.1	3.6	6.1
Atlas Steels Ltd.	100.0	30.4	48.5	14.6	3.8	2.5
Asbestos Corp. Ltd.	100.0	27.6	31.1	20.5	21.0	....
Montreal Locomotive Works Ltd.	100.0	4.1	83.8	10.5	.1	1.5

TABLE 4—Debt-Equity Ratios of Individual Companies

1948 - 1953

Year	*Aluminium Limited*	*International Nickel Limited*	*International Petroleum Limited*	*Canada Packers Limited*	*Howard Smith Paper Mills Limited*
1948	113	....	....	27.0	37.5
1949	107	....	....	....	31.5
1950	120	....	....	....	26.4
1951	106	....	....	....	46.4
1952	152	....	....	....	50.8
1953	152	....	....	....	43.7

	General Steel Wares	*British Columbia Packers Limited*	*Atlas Steels Limited*	*Asbestos Corporation Limited*	*Montreal Locomotive Limited*
1948	14.8	12.0	....	....	....
1949	12.0	8.8	....	....	....
1950	42.3	28.0	....	....	....
1951	40.6	24.0	82.3	....	....
1952	37.9	63.2	64.2	....	....
1953	61.0	57.5	61.0	....	....

Where Do U. S. Exports to Canada Come From?

"Canada is by far the United States' best customer. The United States exported merchandise to Canada in 1954 worth over $2.7 billion, more than four times the amount exported to any other country. This study has identified the cities or states of origin of $965,387,517 worth of 1954 exports to Canada, or 35.8% of the total.

"A large proportion of the exports to Canada originate in the highly industrialized states bordering the Great Lakes. Nevertheless, nearly half the exports came from other parts of the country. For instance, over 80% of the fruits, vegetables, and cotton exports reported came from five states which are among the farthest from Canada. Also, over 43% of the chemical exports identified by this study originate in the Central Eastern and Gulf States.

"Still more significant is the relatively greater share that small- and medium-size enterprises in the United States have in export trade as compared to that of the largest corporations. Over 90% of the exports to Canada in 1954 can be classed as products of manufacturing and mining. A much greater percentage of the export business to Canada belongs to smaller- and medium-size companies, manufacturers and distributors, than might have been expected."

—Battelle Report to C.I.I.A. on Geographical Origins of U.S. Exports to Canada.

Which Canadian Industry is the Best Investment

Hans Lovink, Rad Latimer,
Georges Suart, Beverly E. Lanning

Lacking in Canada for the intelligent investor are economic analyses of industries. Which are Canada's leading growth industries? What are the sources and comparative costs of their labour and basic raw materials, their relative labour productivity? What are their present markets and future prospects? What is their foreign competition? What is government policy with regard to tariffs which affect them? Are they affected by the economics of size and specialization? Is it possible for Canadians to invest in them?

The answers to these and many other questions are partly projections ahead of Canada's population and gross national product, partly the resultant of the individual companies within each industry. To find answers, the investment management class at the University of Western Ontario was divided into syndicates each with a leader responsible primarily for co-ordinating the research and producing a report on his industry.

The following are four typical industry reports (cut with Procrustean severity and shorn of their detailed company analyses) on Canada's building industry, steel, groceries and consumer credit.

Canada's Construction Industry

Hans Lovink

The purpose of this study is two-fold:

1. To determine the growth potential of the construction industry as a whole with a view to its desirability for long-term investment.
2. To reach a conclusion on the relative merit as a potential investment of four leading companies in that industry, all actively traded on the exchanges.

After careful analysis the writer has come to the conclusion that the outlook for the construction industry is extremely favourable.

Economic Analysis of the Industry

As the Financial Post pointed out in February, 1956, there are "three fundamentals for a burgeoning construction industry — more people, more industry, and a rising standard of living". More people demand more houses. They demand more consumer and durable goods — more stores, packing plants, factories, electric power stations, dams, roads, etc., etc. In other words, they demand more construction and more industry. This expansion of the economy would be geared directly to the rise in population, however, were it not for the rise in the standard of living, or the increase of productivity over and above the rise in income.

Table I. — Total Value of Construction Work Performed in Canada

(Values in $ Millions)

	1950		1953		1954(1)		1955(2)	
	Value	%	*Value*	%	*Value*	%	*Value*	%
Total Construction	2,728	100.0	4,640	100.0	4,690	100.0	5,059	100.0
Total Building: Construction	1,633	59.9	2,812	60.6	2,892	61.7	3,111	61.5
Residential	509	18.6	1,297	28.0	1,391	29.7	1,512	29.9
Industrial	275	10.1	402	8.7	352	7.5	378	7.5
Other	849	31.2	1,113	24.0	1,149	24.4	1,222	24.2
Total Engineering: Construction	1,095	40.1	1,828	39.4	1,798	38.3	1,948	38.5
Roads	314	11.5	467	10.1	470	10.0	510	10.1
Electric Power	280	10.3	338	7.3	358	7.6	372	7.4
Other	501	18.3	993	22.0	970	20.6	1,045	21.0

(1) Preliminary Actual. (2) Intentions.

Source: D.B.S.—Construction in Canada, 1953-1955; Table III.

The key to an expanding economy is thus a combination of more people and a greater productivity per capita. Increased productivity and an adequate supply of capital are of course inseparably tied together. The measure to which the construction industry, perhaps more than any other, is dependent on such overall economic progress, is evident. To what extent it will participate in such advance, however, is still an open question.

Residential Construction

From Table II it can be seen that Canada's population, projected to 1961 and 1971, shows figures of 17.8 million and 21.7 million respectively,

increases of 18% and 41% over the estimated 1954 figure of 15.2 million people. This in itself is highly significant to the amount of residential construction that will be required. In addition to this, however, the number of persons per dwelling has constantly been declining, and this adds even greater importance to the aforementioned population

Table II. — Population, Persons Per Dwelling and Number of Occupied Dwellings in Canada

Year	*Population* (000)	*Occupied Dwellings* (000)	*Persons per Dwelling*
1901	5,324(1)	1,018(1)	5.23(1)
1911	7,192	1,409	5.11
1921	8,775	1,764	4.97
1931	10,363	2,227	4.65
1941	11,490	2,573	4.47
1951	13,623	3,349	4.07
1952	14,405(2)	3,561(2)	4.0 (2)
1953	14,756	3,625	4.0
1956	15,990(3)	4,100(4)	3.8 (4)
1961	17,830	4,800	3.65
1966	19,740	5,550	3.4
1971	21,710	6,300	3.2

(1) Source: 1901-1951; D.B.S.—9th Census of Housing, 1951; Size of Household; Table I.

(2) Source: 1952-54; D.B.S.—Estimates of Households and Families in Canada, 1954; Table I.

(3) Source: 1956-71; D.B.S.—Memorandum on the Projection of Population Statistics, 1954; Table I and II Combined Assumptions: (1) medium birth rate; (2) medium rate of net immigration.

(4) Projected.

increases. It is recognized that this decrease in the persons per dwelling must inevitably slow down, and it is doubtful that it will ever reach the low number of 3.2 projected for 1971. This "accelerator" to the amount of residential construction required is then gradually going to disappear, and such construction will therefore tend to conform more closely to actual increases in population. As a consequence, the gap between residential and all other building construction will in all probability narrow

with time. Nevertheless, it is quite likely that between now and 1961 at least 700,000 dwellings will be constructed, or an average of 140,000 annually. This is equal to some of the best years the construction industry has enjoyed. The distinct trend to suburban living will undoubtedly be an important additional stimulus here.

Industrial and Other Construction

From Table III it can be seen that the Gross National Product (G.N.P.), in constant 1935-39 dollars, from 1950 to 1953, has increased by approximately $2 billion. This amounts to about 20%. Furthermore, the *per capita* productivity has also shown a remarkable increase of almost 10% in these four years. It is known that 1954 was a poor year for the Canadian economy, and definite figures for 1955 are not yet available. However, the G.N.P. in 1955 is believed to be about $27 billion, a very significant increase over 1953, let alone 1954. Whether this rate of economic expansion can be maintained cannot be said with any degree of certainty. The rate at which industry has been investing in plant and equipment certainly denotes a strong feeling of optimism. Certainly the continuous technological innovations denounce the "stagnation" theories which have been presented by some economists.[1] The welfare of the industrial and "other" part of building construction is so closely tied in with the rate of business expansion, that the answer to this question is of primary importance. The feeling here is that the present rate of progress will be maintained for at least four or five years in the future.

[1]Notably A. H. Hansen.

Table III. — Gross National Product

	G.N.P. at market prices ($ million)	*Per Capita G.N.P. at market prices ($)*	*G.N.P. in constant (1935-39) dollars (million)*	*Per Capita G.N.P. in constant (1935-39) dollars*
1950	18,203	1,328	10,330	753
1951	21,474	1,533	10,935	781
1952	23,255	1,612	11,677	809
1953	24,449	1,654	12,134	821
1954(1)	24,401	1,582	11,725	772

(1) Preliminary

Source: Canadian Tax Foundation — The National Finances 1955-56.

Table IV. — Total Construction in Current and Constant Dollars, and as a Percentage of G.N.P.

	Construction ($ million)		*Construction as % of G.N.P.*	
	Current	*Constant*	*Current*	*Constant*
1950	3,132	2,974	17.2	17.2
1951	3,661	3,091	17.0	16.9
1952	4,198	3,357	18.0	17.1
1953	4,640	3,602	19.0	17.7
1954	4,690	3,640	19.5	18.4

Source: D.B.S. — Construction in Canada, 1953-1955; Table I.

An interesting sidelight on the problem of the rate of increase of our G.N.P., is the fact that the construction industry as a whole has increased noticeably as a percentage of Gross National Product, even in constant dollars (Table IV). In other words, the value of construction work performed has not merely increased in direct relation with the total value of G.N.P., but *faster.* If the experience of the last five years is any indication, then this trend may well continue.

Engineering Construction

In 1954 roughly 38% of total construction *work done* went into engineering construction, i.e. roads, electric power plants, docks, bridges, etc. (Table I). Most of the work was done on order of one of the three branches of *government,* federal, provincial or municipal. This is significant to the construction industry for various reasons. First, it means that the volume of engineering construction performed is not directly dependent on the amount of private capital available for this purpose; secondly, that the field of engineering construction is influenced to a much lesser extent by cyclical variations in private investment. Indeed, government control of this part of the industry probably makes it *countercyclical.* The need for roads, bridges, etc., will tend to maintain engineering construction at roughly the same percentage of total construction which it has traditionally represented. In times of depression, however, this percentage will likely *increase.* This is felt to be so because the government today is in effect committed to the concept of the "planned economy", i.e. the maintenance of full employment through (increased?) deficit spending in times of "bust", as well as through the use of various indirect measures such as increased depreciation allowances

on new assets. Engineering construction may thus be looked upon somewhat as a comfortable cushion for the industry to fall back on in a less prosperous period.

The Business Cycle and the Industry

The above raises a question regarding the extent to which the rest of the industry is affected by cyclical fluctuations. The behaviour of residential construction is probably similar to that of many other industries producing consumer durables. The fact that shelter is such a basic need, however, suggests that fluctuations in residential construction would be somewhat less violent than might be expected in the manufacture of other durable consumer products.

Construction for industrial, commercial and institutional purposes is of course, as might be expected, highly cyclical. It is directly related to industry's confidence in and assessment of the future of the economy. This connection is in effect so close that the volume of industrial construction contracts awarded is often taken as a major indicator in economic forecasting.

As was pointed out above, however, this tendency to cyclical fluctiation is possibly not as important to the industry *as a whole* as it may appear. It is not likely, due to the steadying influence of the engineering branch, that the construction industry will ever have to face as serious difficulties as have traditionally confronted other durable goods industries in the event of a downturn. Together with the growth factors cited above, this overall, *comparative,* stability makes the construction industry an extremely desirable area for investment.

In conclusion it must be emphasized, however, that in reaching investment decisions regarding particular companies engaged in the field of construction their specific activities should be carefully analysed. A company primarily engaged in the cyclical area of industrial construction obviously stands to gain little from the *general* stability of the industry as a whole.

THE CONSUMER CREDIT INDUSTRY IN CANADA

Rad Latimer

The growth in consumer credit from 1941 to the end of 1953 has amounted to a staggering 943% increase (see Table I). From 1941 to 1951 there was a growth of 467% and in the following two years an even more impressive rise of 200%. Yet Table III shows that for the two years 1954 and 1955 the amount of credit outstanding grew only 13%. This suggests that the big post-war growing period of consumer credit is over, and that, having now reached its right share of the sales market, it will in future expand more or less at the same rate as the economy.

Table I. — Growth of Consumer Credit Industry ($ millions)

Year	*Credit Issued*	*% Rise from* 1941	*% Rise from* 1951
1953	943	943%	200%
1952	819	819%	
1951	467	467%	
1941	100		

Cyclical Nature of the Industry

The following table shows the percentage drops from the 1953 highs, caused by the recession of 1954, for several of the factors in our economy.

Table II.* — Change of Canadian Economy from 1953 to 1954

Labour income	(rose)		2.3%
Retail trade	dropped	1.3%	
Gross national product	"	1.8%	
Industrial production	"	5.2%	
New consumer credit	"	15.8%	
New auto sales	"	17.8%	
Steel sales	"	20.7%	

*Source: Canadian Statistical Review.

Thus, it is evident that consumer credit ranks amongst the more cyclical industries in our economy, and its earnings and profits will be vulnerable to any business recession.

Nor is it surprising that consumer credit should have a relatively violent reaction to economic changes for it is wholly dependent on sales

of consumer durables, particularly cars. The latest D.B.S. figures for the year 1954 show that only 10% of personal income went into consumer durables. The purchase of such goods can be postponed during a period of falling incomes since the present possessions have a useful life much longer than the style-conscious manufacturers suggest in boom years. Hence it is conceivable that a drop of 5% in total national income would almost wholly be absorbed in the 10% of total income spent on consumer durables, cutting the purchase of consumer durables by up to 50% of its former level. It is this leverage factor which makes the durable goods industry and through it the consumer credit industry so cyclical.

Level of Consumer Credit

The actual amount of consumer credit is of course relative to the amount of income backing it. In order to see what has happened to consumer credit in recent years, the labour income monthly average and the amount of credit outstanding for selected items were compared.

Table III. — Level of Consumer Credit in Canada

Year	*Period*	*Average Monthly Labour Income* $ *million*	*Consumer Credit Outstanding* $ *million*	*% of Credit Outstanding to Labour Income*
1953	full year	976	1,860	191
1954	" "	999	1,974	198
1955	2nd quarter	1,108	2,098	190

These figures, which are taken from the January 1956 Canadian Statistical Review, are indicative of the general level of consumer credit and show that it rose, in relation to labour income, by about 7% in 1954 but sank back again by the 2nd quarter of 1955.

The most important measure of consumer credit is the average repayment term. The past history of finance companies shows how low they have kept their bad debt losses (1/4 to 1/10 of 1%), proving that the companies have insured and likely will continue to insure that sufficient income is available to meet the terms of their contracts. Even the argument that a general recession would affect adversely the finance companies' low loss through bad debts is weakened by the fact that during the 1954 recession labour income actually rose by 2.3%. It is the length of life of the contracts relative to the normal life of the commodity purchased that ultimately determines when consumer credit reaches too high a level. For example, if the average new car is only kept for two years and contracts are being issued to buy new cars over a three-year period, then, since the majority of new cars (about 70%) are

purchased on credit, it is evident that the whole market pattern of new car demand would be changed from a two year to a three year replacement cycle. Suppose the average finance contract ran for six years and the average useful life was only five years. Not only would the market be changed, but it would become chaotic with people still paying for purchases which were by then on the junk pile. Therefore the real control of consumer credit rests in the length of the average contract, and the following table shows what has been happening to this in recent years.

Table IV. — Average Length of Consumer Credit Contracts

Year	*Average Contract*	*Average Contract New Autos*	*Average Contract Used Autos*
1954	298 days	306 days	264 days
1953	270 "	282 "	245 "
1951	244 "	259 "	207 "
1941	236 "	not available	not available

Although these figures show a sharp rise in the last three years, the present levels are not alarming. Assuming that most of the purchases are cars, T.V. sets, washing machines and the like, one sees that the present contracts are running well within the present life cycle for this type of purchase. In other words, the consumer will have finished paying for the article considerably before he needs to buy a new one.

Companies, furthermore, in their own interest, will continue to ensure that there is sufficient income to fulfill the contract, and that the life of the contract itself is well within the safety limits.

Future Growth

Although consumer credit could safely undergo considerable growth by a further lengthening of repayment time, it is unlikely that this will happen, in the author's view, because of Canada's present need for investment capital. The latest figures show that only 8.3% of personal income is being saved, yet Canada is investing over 20% of its annual production. If Canada is not anxious to have all the difference made up by capital from foreign sources, it is evident that more saving must be done in Canada and the majority of increased saving would be a transfer from consumer durables.

The future prospects of consumer credit are also affected by interest rates. Since the government has set a maximum limit that can be charged the consumer for credit, the industry is vitally concerned at what interest

rates it must itself pay for the very large amounts of capital it borrows. Owing to the fiscal policy of modern governments, basic interest rates will be lowered to nip recessions and raised to dampen booms. Hence the important thing to finance companies will still be the business cycle itself and changes in the interest they pay on borrowed money will generally be only a reaction to the more important ups and downs of business in general. Thus the present tendency in 1956 to raise interest rates is automatically lowering the profits of the consumer credit industry.

The most probable rate of future growth in the consumer credit industry appears to be a relatively slow increase matching the ever increasing population and gross national product. The industry is an important one to the economy, accounting as it does for about 13% of all retail sales, but due to Canada's great need for investment capital it seems unlikely that the terrific expansion of the last ten years will be allowed to continue.

Conclusions

This industry is a basic part of Canada's economic system. It is composed of a few relatively large companies run on a sound and competent basis. At the present time, despite rapid growth, it is not overexpanded, but appears to have passed its period of rapid growth and a slow sedate growth curve similar to one that might be drawn for population can be expected in the future.

CANADA'S STEEL INDUSTRY

Georges Suart

The steel industry has presently reached a new high in both earnings and market price. The fact that this is a very cyclical industry makes it questionable whether the present is an ideal time for an investment in steel. However, the old slogan, "as goes steel, so goes the nation", has proven true in the past and, if Canada is to grow as is anticipated, then it can be questioned whether the industry has reached a peak or whether more and more peaks are still to come. We feel very confident in the growth of the steel industry and, although today is perhaps not as good a time to invest in steel as it was in 1948 or 1949, we recommend this industry to the prospective investor.

Steel in Canada

Of fundamental importance in the analysis of an industry is its position in the economic order. How important is the industry and what part does it play in the economic life of the nation?

The importance of the steel industry in Canada cannot be overestimated. It is by no means an exaggeration of its importance to consider the steel industry as the basal stone in the economic structure of Canada's manufacturing activities. Just as the proper and sufficient food is the source of strength for individual Canadians, so steel can be said to be the source of strength of the national economy. This essential role is based in part on the fact that steel itself is used in the manufacture of practically every consumer product. Such essentials as food, clothing, chemicals, and even other metals, could never exist as we know them without steel implements, tools and machines used in their production and transportation.

Canada, and in fact the rest of the world, is at present in an economy based on two prime factors: (1) machine, (2) exchange. A machine economy means production of goods by mechanical rather than manual power. Production of goods by machinery calls for metal. Of the half dozen so-called useful metals, none can come within competing distance of steel if quality is considered in relationship to price.

TABLE I: Steel in Relation to Other Metals (1949 Data)

	Consumption (tons)	*Av. Price cents/pound*
Tin	56,000	77.0
Aluminum	606,000	17.0
Lead	558,000	15.4
Zinc	703,000	12.9
Copper	1,420,000	19.5
Steel	78,000,000	4.0

Source: Iron Age, Jan. 6, 1950

An exchange economy is based on trade. The extent of this trade is limited in a very major way by the cost of transporting goods. Steel reduces the cost of transportation. Ships, automobiles, locomotives and pipe lines are made principally of iron and steel.

TABLE II: Relative Position in Canada of Primary Iron and Steel Industry, 1951

	*Position**	*Value*
Employees (33,393)	3	(*$ millions*)
Salaries and wages	3	108,562
Cost of materials	9	223
Value added of products	5	209
Gross value of products	7	465

*In relation to Canada's 15 leading industries

Important Characteristics of the Industry

Iron and steel manufacture cannot be operated on a "shoestring." 68% of all capital employed by the leading steel companies of the U.S.A. is in the form of fixed property. This may be compared to 38% in the automotive industry and 25% in the confectionery industry. Another measure of this condition is the ratio of sales to dollars of fixed investment. In the steel industry this runs 70 cents in annual sales for each dollar of fixed investment. This is in contrast to $10.42 in annual sales for each dollar of fixed investment in the meat packing industry.

The explanation of the need for large investments is threefold: (1) Steel companies require large reserves of raw materials; (2) Steel-producing equipment is large and expensive; (3) As competition becomes keener and the risk of losing customers becomes greater, companies integrate forward toward the ultimate consumer.

The iron and steel industry has wider swings in the business cycle than industry in general. That is to say, it falls to greater depths during depressions and rises to greater heights during prosperity. This is because its primary function is to supply metal from which we make so many of our durable goods. When business in general is brisk, industries optimistically replace their existing equipment and plant. These orders spell activity for producers of durable goods. This in turn means great activity in the steel industry. When recession sets in, durable goods need not be replaced and operations are curtailed in the steel industry. The rising and falling tide of business affects this industry with cumulative force and creates fluctuations which result in "feast" or "famine".

After years of practically no technical advancement, the steel industry is now in the process of overhauling its scientific and engineering fundamentals. Experimentation in top pressures in the open hearth, continuous casting, and oxygen smelting are some of the very newest technical developments. Technical advancement brings with it a need for professional men. Canadian steel companies have in recent years greatly expanded their staff of professional engineers and skilled technicians.

The large size of the individual steel companies gives the steel industry certain economic advantages. Certainly efficient use of mass production methods in time of operating capacity lower the unit cost of finished steel. As mentioned before, this fact has an adverse effect in time of slow demand due to the large proportion of fixed costs involved in steel operation.

Further, the leading producers in the steel industry enjoy freedom from fear that new competitors will enter the industry because of the huge investments necessary to acquire efficient plant facilities. This can certainly be seen in the fact that there are only four integrated steel pro-

ducers in Canada. However, freedom from new internal competition does not mean absolute freedom. The Canadian steel manufacturers are constantly competing with American and sometimes European steel being imported into Canada.

Three main factors may be said to dictate the location of an integrated steel industry. They are the availability of coal, ore and consumers. In Canada neither iron ore nor coal of suitable quality have yet been found close to our large centres of population. Hence the location of steel-producing facilities has had to be very carefully considered. At present there are three main steel centres in Canada — Hamilton, Sault Ste. Marie, both in Ontario, and Sydney, Nova Scotia. All three are ideally situated so as to capitalize on the availability of coal and ore. Sydney, the home of the Dominion Coal and Steel Corporation, is removed from central Canadian steel markets.

The Canadian steel industry depends for its production upon many secondary industries which sell fabricated or manufactured products containing iron and steel to their consumers. Their market is generally limited to about 16 million people living principally on a thin strip of land extending from the Atlantic to the Pacific. Obviously, it is impossible under such circumstances for them to utilize the mass production methods and resultant cost savings available to United States' producers.

The mass United States' markets make possible the operation of high-capacity, single-purpose rolling mills on long runs of the same section and size. Canadian mills, on the other hand, must carry on what might almost be described as a small-order, corner-store type of business.

The zone nature of the industry, the prince and pauper aspect of its market and the rigidity of its cost structure have in the past served to check any rapid changes in the competitive pattern.

Raw Materials

From 1924 to 1939 no iron ore was produced in Canada (not including Newfoundland), and from then until 1945 practically all of the production came from the Helen Mine in the Michipicoten area of Ontario. Production in 1945 amounted to about 450,000 tons.

Today the picture for iron ore in Canada has changed. Iron ore is presently produced in at least six areas. These are:

(1) the Dominion Walana Company in Newfoundland,
(2) Michipicoten, near Lake Superior,
(3) Steep Rock, near Port Arthur,
(4) Texada Mines, near Vancouver,

(5) Ungava region of Labrador,
(6) Marmora, Ontario.

Canadian iron ore production approached 7.5 million tons in 1954. Imports were 3 million and exports 5.5 million tons. It is expected that Canadian iron ore production may reach 25 million tons in 1960 and could reach 35 million tons with the St. Lawrence Seaway in operation. At present, Canada ranks eigth in iron ore production. But assuming these projections correct, Canada will rise to fourth, surpassed only by the U.S., the U.S.S.R. and France.

A very new source of iron ore is taconite. Not until World War II when some of the major iron ore deposits began to show signs of depletion did steel people decide to take a serious look at taconite. Taconite is diamond-hard and contains a small percentage of iron. Recently a process has been developed to upgrade this substance into a raw material suitable for steel making. Experts in the U.S. say that in 25 or 30 years taconite production will amount to about 40 million tons annually or one-third of the total projected U.S. output of iron ore. Although taconite is not presently produced in Canada, some of the major Canadian companies are acquiring interests in the U.S. taconite mines. Experience gained in the production of taconite in the U.S. has prompted the Steel Company of Canada to buy a half interest in a new iron ore (taconite) mine at Bristol, Quebec. Shipment from Bristol is expectd to start late in 1957.

Scrap iron is another major raw material for the steel industry. In 1954 2.4 million tons of scrap iron were consumed by the steel manufacturers. Over half of this amount was purchased from scrap dealers in Canada and the U.S. Continuation of present heavy exports of scrap could bring about a critical situation for steel producers in Canada.

TABLE III: Canada's Foreign Trade in Scrap Iron

(*thousand tons*)

	Imports	*Exports*
1950	188	62
1951	109	40
1952	206	88
1953	100	410
1954	65	559

As Central Canada possesses no coal fields, the three integrated steel producers now located in Hamilton and Sault Ste. Marie are dependent upon outside sources for their coal. The Dominion Coal and Steel Corporation produces its own coal in Nova Scotia.

Limestone is found in plentiful supply in Central Canada and most of the quarries are company owned.

Markets for Canadian Steel

Steel is the lowest cost metal and is available in an extremely wide range of sizes, forms and properties. Its diversity of application has in recent years created a continued and greater demand for its production.

TABLE IV: Principal Consumers of Canadian Iron and Steel

(*thousand tons*)

	1950	*1951*	*1952*	*1953*	*1954*
Automotive	200.4	249.6	228.0	289.2	140.4
Agricultural	130.8	147.6	142.8	105.6	74.4
Containers	261.6	301.2	279.6	270.0	272.4
Merchant trade	357.6	412.8	403.2	358.8	348.0
Railways	500.4	609.6	618.0	628.8	428.4
Wholesalers	314.4	326.4	333.6	422.4	350.4
Shipbuilding	22.8	40.8	55.2	28.8	15.6
Mining and lumbering	132.0	132.0	189.6	140.4	136.8
Stamping	187.2	178.8	130.8	153.6	160.8
Machinery and tools	116.4	166.8	192.0	158.4	152.4
Construction	357.6	385.2	374.4	434.4	354.0
Total	2,613.6	3,050.4	3,057.6	3,085.2	2,504.4

The consumption of steel by the railroads has been in a gradual downtrend, due mainly to the increasing importance of other means of transportation as autos, trucks, buses, aircraft and pipelines, and also to lighter weight rails and railroad equipment. The automotive industry is now the largest consumer of steel. At present, however, automotive bodies and frames are imported from the U.S. In the average Canadian automobile there is about 3,000 pounds of steel, yet no more than 800 pounds comes from Canadian producers. This accounts for the fact that the Canadian automotive industry took only 5.6% of total Canadian steel in 1954. The Canadian steel industry, not being as vulnerable to the requirements of the auto industry as its American counterpart, will not feel the effects of the predicted lower output of automobiles in 1956.

Building construction is a very important consumer of Canadian steel and there appears no likelihood that the use of steel by this industry will diminish in the future. The steel manufacturers have been developing steel as a material for use in construction through the manufacture of prefabricated steel buildings for various uses and by promoting wall panels and other building sections.

The most stable source of demand for steel is the canned food industry which seems to enjoy long term growth in consumption. The bulk of steel consumed by this industry is produced in Canada. The steel industry in the U.S. depends on the container market only to the extent of 8% of total production; the Canadian manufacturers to the extent of 12%. Thus the Canadian industry is less vulnerable to cyclical conditions than the American counterpart.

Labour Negotiations

In recent years in both the U.S. and Canada, steel prices have tended to move upward with labour costs. This year there is speculation that the C.I.O.-C.C.L. steel workers in the U.S. will insist on gains worth at least 17 cents. Usually, the eventual settlement with labour in the U.S. casts its shadow in Canada.

If labour succeeds in its objective of winning a big increase in wages and other benefits, there will be a steel price increase. If, on the other hand, we have a strike, an already tight supply position could become intolerably difficult.

Labour leaders in Canada point to the higher basic steel profits in 1955 to show that there is no need for steel price increases to go along with wage increases. Company management, on the other hand, point to the tight supply of steel to show that they need money for expansion of Canadian steel capacity.

Canadian steel companies usually look to the Steel Company of Canada to provide a lead in labour negotiations. At present the Steel Company of Canada and the Steelworkers Union are in the early stage of negotiations. It is suggested that the Steel Company of Canada is waiting for an agreement in the U.S. before making any definite proposals.

International Steel Trade and Tariff Question

At present 25% of the steel consumed in Canada comes from abroad. Tariff on rolling mill products is nominal. Canada is thus one of the few industrialized countries in the world importing steel and thereby making its domestic industry vulnerable to world conditions.

Countries such as Brazil, China, India, Japan and Russia, which felt the impact of industrialization later than those of Europe and North America, are now substantial steel producers. The steel industries of these countries and also those of Belgium, Britain, France, Germany, Holland and Italy are today using machinery and production methods quite as up to date as those employed in North America. Yet in none

of the countries mentioned do wage rates even approach those now paid in Canada. So the great problem confronting the Canadian steel industry is how to meet the competitive pressures of low wages and at the same time compete favorably with the mass produced goods of the United States.

The "Big Four" of the Canadian steel industry have in a recent brief to the Government demanded certain revisions in the Canadian tariff on steel. Tariff Board discussions on the steel problem have been delayed. The main reason seems to be that at present Canadian mills are running at full capacity and therefore imports from the U.S. and abroad are not viewed with as much alarm and are not competing directly with Canadian produce. Mr. J. H. McEvoy, Vice-President, Dominion Steel and Coal Corporation, in a recent statement to the tariff board said: "We are not thinking so much about today as about the long term haul, when things are not going to be as booming as they are today."

During the first post-war decade, foreign steel producers have enjoyed heavy domestic demand and have had little incentive to export in large quantities to Canada. However, there is at present nothing to prevent foreign steel producers from invading the Canadian market, inland as well as coastal.

The future growth of the Canadian steel industry thus depends very heavily on the decision of the Tariff Board. An increase in tariffs on imported steel should give the companies added incentive to increase the overall steel capacity. On the other hand, a negative decision might result in an effort to consolidate the industry's present position.

TABLE V: Canadian Steel Imports in Relation to Production

(1953 Values)

	Production in tons	*Imports in tons*	*Imports % of Production*
Bars and Rails	1,100,713	102,250	9.3
Rods	286,471	14,690	5.1
Structural Steel	272,220	309,500	114.0
Sheets, Plates, Hoop Band and Strip	1,352,146	585,000	43.2
Total	3,011,550	1,010,940	33.0

Future of the Steel Industry

Long term—The long term outlook appears very optimistic. The use of steel in our present civilization is so universal that it is virtually im-

possible to imagine a world without it. Yet during 1954 production of steel in Canada amounted to only 402 pounds per capita as compared to 1,087 pounds in the United States. Consumption on a per capita basis was 598 pounds, indicating that there is a wide margin for increased production among Canadian steel companies. The true significance of these figures is brought out more clearly when we compare the rate of growth of Canada and the U.S. In terms of population growth, the average rate of increase between 1944 and 1954 was 1.86% in Canada (not including addition of Newfoundland) as compared with 1.58% in the United States. In terms of industrial growth, both national income and dollar value of manufactured product have increased at a rate half again as great as the industrial giant to the south. The capacity for increased sales of steel in an economy expanding at the rate shown above goes without question.

In a recent study submitted to the Gordon Commission, the Steel Company of Canada has indicated that the expected consumption of steel will be close to 1,100 pounds per capita in 1980, nearly twice the 1954 rate of 598 pounds. The Steel Company brief also indicates that in 1980, 83% of Canadian consumption will be supplied from domestic sources. Assuming a population of 26 million in 1980, this indicates that domestic production in 1980 will be 11,869,000 tons.

Short term—While producers are working at near capacity to satisfy current demand, consumers have made little progress in building up inventories and, in many instances, have only supplies on hand sufficient for a few weeks at present rates of consumption. Another increase of steel prices is forecast for 1956, stemming from steel workers' union contracts and the need of funds for expansion. Demand for steel is therefore expected to continue high in early 1956 as consumers continue their efforts to accumulate inventories ahead of the price rise. The slowdown in automobile production has brought a few cancellations of orders to the steel mills, but mainly the auto manufacturers have ceased to buy conversion and other premium-priced steels.

Summary of Steel Industry as an Investment

The composite price-earnings ratio for the industry is presently at the highest level that it has gained since the end of the war. This indicates that the present is not an ideal time for an investment because of the cyclical pattern of the industry.

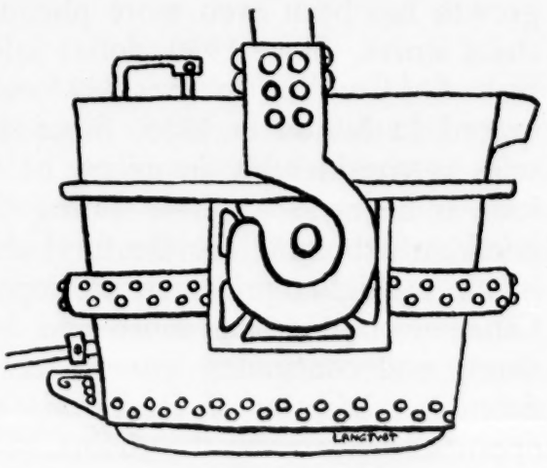


TABLE VI: Composite Price-Earnings Ratio for Canadian Steel Industry

1945 — 8.8	1951 — 11.1
1946 — 14.4	1952 — 13.6
1947 — 10.0	1953 — 12.8
1948 — 6.5	1954 — 20.3
1949 — 7.1	1955 — 19.1
1950 — 7.0	1956*—24.1

*Values based on latest earnings available and market price as of Friday, March 9th, close of trading. This figure is weighted high because no 1955 earnings for Algoma and Dosco are available.

An investor in the Canadian steel industry can expect long term capital appreciation due to the long term growth pattern of the industry. But because of the cyclical aspect of the industry, there is doubt whether the present day is the best time to invest in the industry. However, the expansion and product diversification being carried on by the steel companies have been based on the belief that Canada is in the midst of an industrial boom similar to that of the U.S. between the two world wars, when the major U.S. steel producers developed into their present giant proportions.

CANADA'S FOOD CHAIN INDUSTRY

B. E. Lanning

Canada's rising standard of living and rapidly increasing population are clearly reflected in the tremendous growth of its food industry. This growth has been even more phenomenal in the case of Canadian food chain stores. Since 1930, dollar sales of the food chains have increased from $124 million to over $925 million in 1955. Sales are expected to exceed $1 billion in 1956. Since the percentage growth of food chain sales is considerably in excess of the percentage growth of the retail food industry as a whole during this period, it indicates an extremely good growth trend for the food chains. Although part of this increase is due to higher prices, to an important degree it is an indication that Canadians are eating more and better foods than ever before. The strong and continuing growth trend of this industry, plus the proven defensive character of food chain earnings, provide attractive purchase opportunities among the chains.

Historical Background

During the past 30 years, a revolution has taken place in the food retailing industry. Many forces have combined to bring about the change from the small corner grocery to the huge shopping centre market of today.

The introduction of self-serve stores marked a notable advance in food merchandising. The next step was the evolution of the supermarket itself and, more recently, still larger outlets in suburban areas where population growth is relatively greater. Self-serves have met with a favourable reception since customers benefit from lower prices made possible through bulk purchasing and labour-saving methods. Moreover, they like the greater convenience coupled with the vastly increased variety of articles available. Consequently, expansion programmes launched as soon as the war ended, have resulted in a period of uninterrupted growth for the industry. In the fiscal year 1954-55, the 5 food chains for which financial information is made public had sales which were 4 times those of 1945-46 and 8 times those of 1938-39. Moreover, sales per store, which have undergone tremendous expansion, indicate that the increasing size and efficiency of today's supermarket is primarily responsible for the increased total sales. Sales per store are well over 10 times those of 1938-39, while the expansion of the number of stores has been relatively slow and limited.

This postwar expansion of food chains by way of supermarkets, prompted by increasing population and the use of automobiles, has been accomplished with a minimum of new financing since sale and lease-back arrangements have become widely practiced. Funds for further expansion and inventory needs have been obtained through additional financing coupled with a high degree of retained earnings. Since the industry has had a ready access to capital funds money markets, any new financing necessary has been easily accomplished.

Nature of the Industry

The essential nature of the food chain industry is of prime importance to investors. Industries dealing in consumer non-durables have long been favoured as the investment medium with the greatest number of depression resistant factors. Foremost among this group has been the food chain industry in Canada and the United States. Established companies in the industry have an enviable record of earnings and dividends throughout the depression years of the early thirties and the war years of the early forties. Food chain companies again demonstrated their earning stability by increasing their earnings throughout the more moderate business recessions of 1949 and 1954. This combination of

defensive income and inherent growth should continue to attract investors to securities of sound units of the industry.

The industry is characterized by keen competition, high costs and the necessity of advantageous store locations on one hand, and rapid inventory turnover, labour costs which can be closely controlled, and an inherent essential stability on the other. Costs particularly are a major problem. Profit margins are narrow, varying in 1955 from $2.18 to $1.71 per $100.00 of sales in the case of Loblaw and Dominion respectively, two of the largest companies. The above factors make it both necessary and possible for the industry to operate successfully on narrow profit margins.

Unfavourable Factors

The tremendous industry expansion, though beneficial in the long run, has created several new problems which might be troublesome to the chains. The building and opening of a big supermarket is a major undertaking. While the capital cost of the store and equipment is usually handled by a sale and leaseback arrangement, the higher carrying charges, overhead and start-up expenses, due to their increased size, can result in a sizeable reduction in reported earnings if a large number of new stores are opened each year. This burden can be intensified if chains must bear the additional expense of closing several old stores for each supermarket opened. Fortunately, Canadian food chains, not so long or broadly established as their American counterparts, do not have this problem to the same degree because of the relatively smaller number of small units.

These added expenses restrict earnings and tend to hide the actual earning power of these large installations once they become an efficient operating unit. While it will require several years for large chains to complete a change-over to supermarkets, each unit as it is put into operation brings an improvement, so that earnings should show a steady though restricted growth during this transition period.

The increasing competition among the chains may be an adverse factor of greater long term significance. As long as the chains were competing only with the small independent grocer, competition was relatively unimportant to them. Competition is not particularly harmful even when two chain stores are located in the same shopping district since their combined drawing power seems to be beneficial to both. However, in areas where several chain stores are in direct competition, each may suffer from the law of diminishing returns. This factor will increase in importance as expansion continues. However, at the moment, Canadian chains are not numerous enough to give this factor much weight in an investment decision.

Favourable Factors

The industry is currently benefiting from a number of favourable factors which should continue for the foreseeable future. Perhaps the most important of these is Canada's rapidly increasing population. Canada's postwar immigration boom, plus the large postwar birth rate, brought its population to approximately 16 million by the end of 1955, an increase of over 12% in 5 years. Conservative estimates show population figures in excess of 20 million by 1965. This is an important factor in the rapid expansion of Canada's food chains since it is estimated that the food chain industry will be the foremost to benefit from this basic growth trend.

Chain food stores are participating in, not one, but two kinds of growth. First, there is the growth in the food business as a whole and second, there is the higher percentage of business being done each year by the chains. This increasing penetration of the retail food market is apparent from the fact that chain sales as a percentage of all grocery sales have shown an average annual increase of 1.8%. This has resulted in food chain sales as a percentage of total retail grocery store sales rising from 23.3% in 1947 to over 37% in 1955. At this rate, chains should account for an estimated 50% of all retail food sales by 1960.

Canada's increasing wealth and changing food habits are providing the industry with additional benefits. As family income increases, the industry benefits from the increasing sale of more expensive processed, semi-prepared and frozen foods. The increasing number of men shoppers tend to purchase more meat and other prepared foods. In addition, industrial surveys show that "impulse" vs. planned list buying is increasing steadily, a natural result of the many and diversified displays

found in the typical supermarket. Although the trend toward the sale of higher-profit non-food items appears to have levelled and may even decline, it is unlikely that these items ever did reach a significant proportion of total sales.

The stable trend of commodity prices also benefits the food chains, particularly the large chains who process and sell foods such as bakery products, canned goods and coffee under company brand names. The trend to more company prepared foods continues and is likely to continue as long as the processing margin remains higher than the retail margin.

Summary

Although the adverse factors outlined previously require consideration, in the opinion of the author, the advantages far outweigh the disadvantages. The food chains, it is expected, will continue to attract an increasing part of the family budget. While the volume and variety of merchandise handled is steadily growing, evening openings and similar promotional activities also tend to create even greater sales increases. Although competition is increasing and earnings may be slightly depressed by the costs incurred through expansion, the economies of multiple operation together with the soundness of the industry and the ultimate benefit which will result from the present large expansion, should permit a steady growth of earnings for established units of the industry. Thus, the larger chains seem especially attractive for investment at this time since their established growth potential is combined with an unusual stability of earnings which companies in few other industries can equal.

Looking Ahead

Continuing our policy of the past three years, *The Business Quarterly* will publish in the fall issue a Canadian case problem prepared at the School of Business Administration for group discussion.

R. B. MacPherson, Economist at the DuPont Company of Canada, will write on "The Role of the Company Economist", Business School placement director Neil M. Armstrong on "Companies Views of Personnel Recruiting on the Campus", and Dr. Edward G. Pleva on "The Encroachment of Business on Niagara Fruitlands". Articles will also feature "Operations Research", "Immigration", "Are Farmers Paid "Enough?", "Executive Health", and another business biography—of Jack Brent of I.B.M. International.

Canadian Industries Must Automate

W. Collett, B. Daniel, R. Latimer, K. Tambling

The word "automation" has many different meanings to different people; to some it is a magic key to a bright industrial future, while others see it as a process which will slowly subjugate man to his own machines. Here a definition has been chosen broad enough to cover all aspects of the subject, while at the same time doing away with the emotional and subjective fears or hopes that have become attached to the word.

All productive labour of man can be divided into three functional area: (a) Physical work, (b) Sensory processes giving rise to routine interpretation and action, and (c) Creative thinking.

The "Industrial Revolution" was largely the rise of machinery to replace a large part of the physical labour that had previously made up economic activity. Automation is defined as the use of machinery to take over area (b) as well as area (a), and the type of creative thinking necessary to integrate these two areas into a smoothly functioning unit. This definition holds just as adequately for the automation of an accounting procedure as for that of a manufacturing line. It also stresses that a new way of looking at a process, called "automation thinking", is in order.

Automation Already Here

Occasionally one hears of an almost completely automatic factory or industry, but in most instances present day examples of automation are piecemeal, being applied only to those processes where real savings can be effected.

We are moving out of a sellers' market where competition both from others within an industry, and more generally from anyone who wants a slice of each dollar spent, is becoming increasingly tough. Companies who do not take advantage of the way in which automation can cut production costs and administrative costs will be in trouble. Many of the patent rights on present day products are running out; new technological advances may obviate products quickly, so that patents and secret processes can no longer be counted on to command premium prices.

In many areas automation will give Canadian manufacturers their only chance to compete successfully against the low cost labour areas of the world. For a country such as Canada, which is so intimately connected with world markets, the implications are obvious.

Automation always results in much greater output per square foot of space, with a resultant reduction in building and overhead costs.

Finally, one finds that such heavy investment in machinery gives employees greater security, not less, for it would be suicidal for management to leave such machinery idle. In general, as automation increases, the whole economy will benefit from the more intensive planning that such heavy expenditures will force on the individual managements.

Some of the areas in which technical difficulties are arising and will arise are: plant location, plant layout, plant and production engineering, product design, scheduling, maintenance, quality control, time and motion study, inventory and material control, accounting and finance, marketing, and personnel.

Type of Industry and Organization

It takes managerial thought and skill, not just the blind application of automaticity, to achieve an economic and socially desirable level of mechanization. One of management's main considerations in automating is careful analysis of the "processing" functions. The product must conform to large volume production, repetitive operations, and simple assembly.

Oil refining, flour milling and chemical production are industries in which automation has made and should continue to make significant progress. A second class, in which some automation is possible, but full or complete automation is not likely, includes transportation, large scale retailing, and the manufacture of certain non-standardized consumer products such as furniture. A third group, in which no significant application of automation seems likely, includes agriculture, mining, the professions, and most construction and retailing. Under automation, rapid and efficicient communications are paramount. Delays in decisions and errors by machines are costly. As illustrations of the startling results of automatic machines that may make an error only once in ten million times:

> In New Jersey a magazine subscriber received 20,000 copies when the automatic addressing machine had jammed on his name plate.
>
> Elsewhere in the United States an overjoyed taxpayer received a government cheque for $5 million from a machine apparently enchanted with zeros.

In Italy, an automatic machine manufacturing synthetic fabrics for bathing suits went awry on its mix. When immersed in salt water, the bathing suits dissolved.[1]

Short-Run Viewpoint

The most controversial short-term aspects of automation are how it will affect (1) the national employment situation, (2) job levels in different industries, and (3) the individual worker. Anxiety and fear have already possessed many groups, and these intangibles are posing a major problem at the present time. During the past eighteen months, in particular, labour leaders, such as former C.I.O. President Walter P. Reuther, have been sounding warnings of the possible dire effects of automation in the immediate future. They have stated that these problems include dislocation of the labour force, geographical shifts of industry, labour displacement, and changes in the skills of workers.

In general, both unions and management agree that automation will prove very beneficial to society over an extended period of time. It is during the next few years that the unions, in particular, feel the individual worker is threatened with insecurity. The C.I.O. News stated, "The benefits of automation are easy to comprehend—the freeing of workers from the drudgery of many routine jobs. But if workers are to be laid off in the 'short run', they will have little chance to enjoy the 'long-run' benefits of automation. The problem is not whether we should or should not have automation . . . it is simply how we should fashion the social tool to make automation a blessing . . ."

At the annual convention of the Canadian Congress of Labour in October, 1955, a resolution was adopted, asking the Federal Government to convene a conference of representatives of Government, management and labour to plan the introduction of automation so as to provide abundance and prevent unemployment. Canadian Government debates, while airing views both in praise and in fear of automation, have proved inconclusive. Hon. Milton F. Gregg, Federal Minister of Labour, in October, 1955, publicly expressed confidence in the attitude and approach taken toward automation by the Canadian trade unions.

Labour's Fears Unnecessary

While it is readily agreed that much research and study should be devoted to the problems which are likely to arise from automation in the near future, or "transition period", these problems need not cause panic or excessive worry. Automation must of necessity be introduced grad-

[1]Canadian Business, October 1955, p. 32.

ually. Automatic control devices are expensive. An investment of $100,000 per worker in automatic machinery will be required to bring a measure of automation into production industries.[2] This, when compared with the $10,829 invested in machinery per production worker in 1951, shows that a fantastically large capital outlay still must be made. Even a prosperous and expanding economy, such as the Canadian, must still grow tremendously to provide the sums needed for such heavy increases in production facilities. And with such expansion taking place it would hardly be possible to have large groups unemployed.

Social Implications of Automation

The primary reason for this general feeling that automation is a destroyer of jobs, a maker of unemployment and a possible creator of depressions, is *poor interpretation* both of the statistics and the explanations. The public is continually hearing the union's views and very little from management. Management is not blind to the fact that population is increasing and competition is becoming keener, thereby requiring greater productivity. However, management must ever be mindful of possible labour repercussions to their remarks concerning automation.

Facts can prove that automation does not destroy jobs, but creates them:

1. In the dial phone industry in the United States, between 1940 and 1950, the number of telephone operators increased by 79% despite wide installation of automatic equipment.
2. During the same decade the number of Chartered Accountants increased by 71% despite new electronic equipment.
3. In the automobile business the number of employees doubled from 1940 to 1950 and it is believed that every new job in the automotive field creates five new jobs in allied fields.

The best way to clear up these "supposed fears" is to present the facts clearly and to make logical assumptions. It is of prime importance, however, that we think of automation as *technological progress,* in other words, *more* production and yet *less* hard work per worker.

What Part of Our Economy Will Be Affected?

Manufacturing accounts for less than 30% of the jobs here in Canada. Yet it is primarily in this segment that automation will make its big contribution. Manufacturing will play a larger, more important role in our economy in the future, thereby requiring more labour than

[2]Challenge, March 1955, p. 11:5.

at present. Yet, as will be substantiated later, Canada's labour force will not increase at a sufficient rate to take up this expansion.

Some feel that wage costs in relation to overall production costs of our manufacturing industries tend to pressure management into decreasing labour in relation to output rather than increasing it.[3] In other words, there is a tendency to increase the output per worker — this is inherent in any capitalistic ecenomy. In a young, aggressive and expanding economy like ours, where the standard of living is continually rising, it means that the output per worker is increasing at a faster rate than the size of the labour force. This is "technological progress".

Do We Need Automation?

Society as a whole is clamouring for new products, new designs, less expensive products, and an increased standard of living, without regard to the individual. However, unions are aware that the individual worker might suffer during the transition period.

One of the most important issues around the bargaining table today is the guaranteed annual wage. In one respect, however, automation implies a type of guaranteed annual wage because management has or will have so much capital tied up in machinery that it cannot afford to have a plant stop or shut down, even for an hour. Therefore, the workers in automated plants are almost guaranteed steady jobs.

The Canadian Economic Research Associates, Toronto, in conjunction with the Royal Commission on Canada's Economic Prospects recently made a detailed population estimate for 1975 of between 23 and 25 million people, an estimated 60% increase over the present population. The labour force in 1975 is estimated at approximately 7.2 million, approximately 1.5 million increase over today's force. This increase will *not* be sufficient to satisfy the 1975 demand. There will be 8.3 million more Canadian mouths to feed, and bodies to clothe; Canadian facilities will have to provide homes, buildings, roads, transportation and education for them. In addition, these new Canadians will be looking for an even greater number of personalized services.

Unions admit that their next goal is the shorter work week. The present 40-hour week was not obtained at once, but gradually over the years. The unions are now proposing a sudden change to a 4-day week. This could prove very risky for the welfare of the economy as a whole. The output per worker per hour has increased slowly but steadily over the years, enough to maintain a balance between annual pay and annual output.

[3]"Is Labour Pricing Canada Out of the Market?" *The Business Quarterly*, Winter 1955, p. 251.

Thus, to summarize, the main reasons why we *must* automate are:

1. More Canadians demanding more and better products at a lower price, continually striving to increase the standard of living.
2. Even without a shorter work week there will be more jobs available than workers, and if the 4-day week becomes a reality this deficiency of labour will be accentuated.

How Will Automation Affect Canada?

The Canadian standard of living, measured by gross national product divided by "total population", has been increasing at approximately 3% per year (compounded annually) since 1940. This rate, if extended to 1975 (which is the very minimum for which Canada should strive), would mean a per capital standard of living of $2,920, measured in 1955 dollars, compared to our present standard of living of $1,681. The comparable estimated figure for the United States is $3,900 for 1975.[4] Combination of the Canadian per capital figure for 1975 with an estimated population of approximately 24 million people would indicate a gross national product for Canada of $70 billion for that year.

Canada's productivity, measured by average annual output per worker of goods and services, has been rising at the rate of approximately 3% per year (compounded annually). If it continues at this rate (and there are no foreseeable reasons why it should not) each worker should be producing $8,400 worth of goods and services in 1975, compared with today's $4,663 worth. However, to attain this position a labour force of approximately 8.3 million workers will be required. This is 1.1 million more than the C.E.R.A. estimates. To complicate matters further, there is the demand for the 4-day week. By 1975 this would mean a *shortage* of approximately 3 million labourers here in Canada.

If Canadians wish to continue increasing their standard of living at its present rate or better, they will thus have to find the additional labour required. Certainly, there is no wish to coax "unanxious" people back to work. What must be done is to progress technologically to take up this slack — the answer is automation.

Can We Make Preparations?

Education must create an awareness that the Canadian economy is a very dynamic and flexible one. The increased rate of obsolescence will help to spread acceptance of this new attitude.

[4]Factory Management and Maintenance, September 1955.

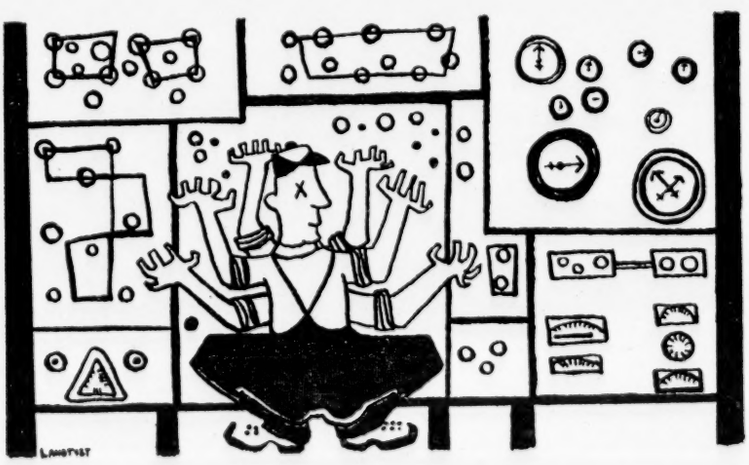
Executives of tomorrow must keep their ideas modern, while remaining creative thinkers. Achievement of this can be done by a constantly aggressive attitude towards the information that is available on all types of business. Management cannot be conservative; they must continually do research and testing. These executives will be aided by experts who analyze trends affecting future markets, and relate them to each other and to production planning.

There is a growing conviction that those who manage automated business must have a well rounded education. Some companies send their promising executives to universities, the aim being to make them better informed and more able to relate their jobs to the economy and to society.

The need for many more engineers and electronic technicians, and the proportion of maintenance people will increase, as well as the skill required of them. A large portion of the immense educational burden must be undertaken by the more alert engineering colleges and community vocational schools. For this, extensive revision of their curricula will be required. Company apprenticeship programmes will also undergo major changes to keep pace with automation's advances.

General Conclusion

Although many people watch the gradual advance of automation fearing that in the short run it will cause many serious social and economic problems, there is no need for such trepidation. In the past, our economy has proved that it is very flexible, easily able to adjust and adapt itself to new conditions. Many organizations have assumed a constructive attitude toward the new technology and have stirred up government enthusiasm and co-operation for handling the issues wisely.



WHY CANADIAN INDUSTRY MUST AUTOMATE

Year	*Comment*	*Out of This Many Workers Available*	*It Takes This Many Employed* 40 Hrs.	32 Hrs.	*Producing at This Average Output Per Worker*	*To Give This Gross National Product*	*So That This Population*	*Can Have This Per Capita Standard of Living*
		(*Millions*)	(*Millions*)			(*Billion*)	(*Millions*)	
1940	There was little need for automation — wage rates were low— LABOUR SURPLUS	4.56	4.13	.....	$3,084	$12.74	11.4	$1,117
1955	There is a little automation. Labour is really close to being in balance— LABOUR BALANCE	5.77	5.64	.....	$4,663	$26.30	15.7	$1,681
1975	If automation continues at the present rate every available worker will have to work a full 40-hour week to keep raising the standard of living. Additional workers to permit a shorter week won't exist. LABOUR SHORTAGE	7.20	8.3	10.4	$8,400	$70.00	24.0	$2,920

Explanation of Table

1. A similar table for U.S.A. was published in September 1955, "Factory Management and Maintenance".

2. 1940 and 1955 figures are from Dominion Bureau of Statistics, and the 1940 figures have been converted to 1955 constant dollars. Using 1955 as a base of 100, 1955 to 1947-49 is 114.5; therefore we use a factor of 1/114.5. The relationship between 1949 and 1947-49 is .9393 to 1, and 1940 was .657 to 1 as compared to 1949. Therefore, comparing 1940 to 1947-49 is .9393 x .657/114.5 as our 1940 factor to bring it to the 1955 basis.

3. The percentage increase in gross national product between 1940 and 1955 was determined and an assumption was made that the least the economy should strive for is a continuation of this rate, and so the 1975 figure:

$$\frac{26.30}{12.74} \times 100 = 207\% = \text{increase from 1940 in 1955 dollars}$$

$$\frac{1}{2.07} = .485$$ - took the reciprocal and found from the "present value of a dollar" tables that this represents a 5% per year increase over 15 years.

For 20 years the value of the present dollar is .377.

Therefore gross national product $\frac{1}{.377} \times 26.30 =$ approx. 70 billion.

4. Canadian Economic Research Associates made 1975 population estimates, both in total and in labour force.

5. In determining average output per worker the same approach as used in 3 was used.

$$\frac{4,663}{3,084} \times 100 = 151\% \qquad \frac{1}{1.51} = .662$$

$= 3\%$ per year (compounded annually for 15 years)

$$\frac{1}{.554} \times 4,663 = \$8,400$$ - present value of dollar in twenty years at 3% is .554.

6. To determine the number of workers required, the gross national product estimate was divided by the average output per worker.

$$\frac{70.00}{8,400} = 8.3 \text{ million workers required.}$$

Canadian Loan to Haiti

The World Bank on May 7 made a loan of $2.6 million to Haiti to help finance a three-year highway improvement programme. The Royal Bank of Canada is participating in the loan, without the World Bank's guarantee, to the extent of $413,000, representing the first three maturities which fall due from July 1, 1959 through July 1, 1960. This is the first time that a Canadian bank has participated in a World Bank loan.

The loan is the first made by the World Bank to Haiti. It is for a term of 10 years and bears interest of 4½% including the statutory 1% commission charged by the Bank. Amortization will begin July 1, 1959.

—International Financial News Survey, May 11, 1956.

Airplanes Atom Powered by Rolls-Royce

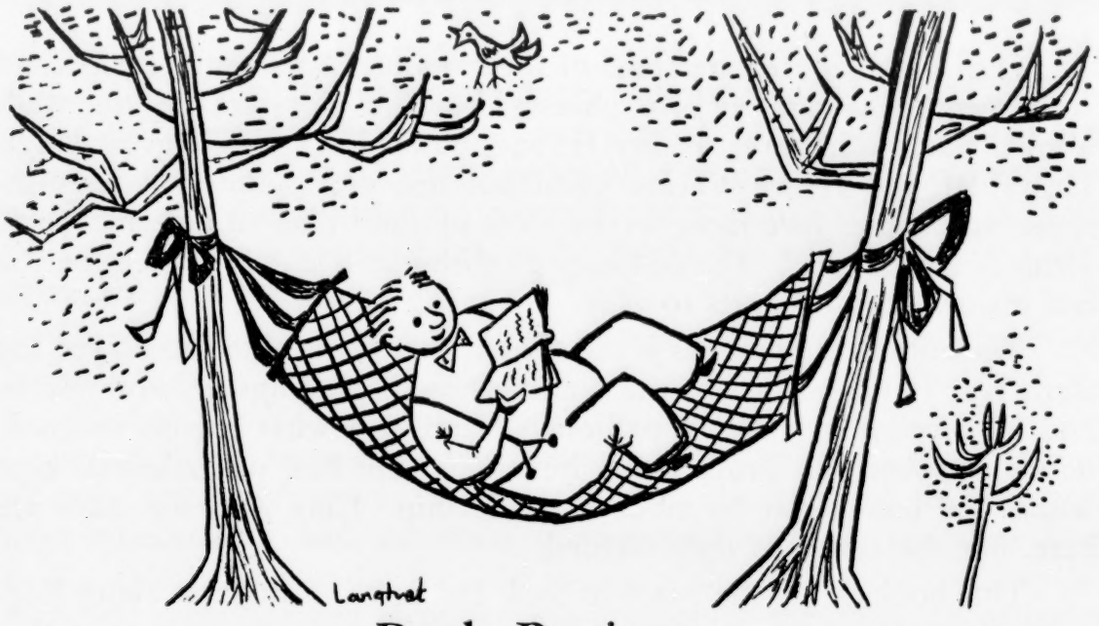
"Rolls-Royce work on the application of atomic energy to aircraft propulsion and related fields, which has been in progress for the last eighteen months, will shortly be supplemented by the completion of a nuclear engineering laboratory specially designed and built for the purpose.

"The Society of British Aircraft Constructors states that atom-powered aircraft will employ the jet propulsion system in one form or another. But whereas the efflux temperature of a conventional turbojet may reach 1,300-1,500°F, it may reach as much as 4,000°F in an atomic engine. Consequently, the development of metals which boil only at very high temperatures is of prime importance.

"Rolls-Royce's Derby works have now built and delivered their last piston aero engine—a Griffon for a South African Air Force Shackleton. Since the first production aero engine manufactured by Rolls-Royce left this factory in December, 1915, no fewer than 51,169 piston aero engines have been built there.

"On November 17, 1945, the first Derby-built turbojet went on test and piston-engine production was progressively tailed off. Since then, Rolls-Royce has sold more than £27 million worth of the Dart turboprop; and the Avon turbojet is the most widely manufactured turbojet in the world today."

—F.B.I. Review, March 1956.



Book Reviews

A HISTORY OF THE ENGLISH-SPEAKING PEOPLES VOLUME I: THE BIRTH OF BRITAIN

by Sir Winston Churchill. McClelland and Stewart, Ltd., Toronto, 1956. 521 pp. $6.50.

Winston Churchill, in 1939, had ready the first draft of a "History of the English-Speaking Peoples." Now a world war, two prime ministerships, and six volumes of memoirs later, Sir Winston publishes the first volume of an expanded and revised work. The History will finally be complete in four volumes and the narrative will be brought to the death of Queen Victoria. It is quite likely that the later volumes will be the more interesting as the attempt to write a coherent story of all the English-speaking nations is an heroic one and we may expect Churchill's interpretation to be a fascinating personal document.

The present volume is the necessary beginning of the story, but it is nonetheless complete and understandable in itself. The birth of Britain, for Churchill, means the monarchy, the common law, parliamentary institutions, and a national self-consciousness growing up within the island of Britain. The word "island" rings through the book like the insistent tolling of a bell. This history is not exactly a history of England in the Middle Ages. The reader will find little to tell him of what went on in manor house or peasant hut, nor will he learn much of the life of monks, merchants and scholars. The birth of Britain, on the whole, is the tale of kings and politics and wars. Here is the familiar pageant of English rulers—Caesar, Alfred the Great, The Conqueror, Henry II and his "devil's brood", and so on through the bloody fields of Falkirk, Crécy, and Agincourt to Bosworth and the death of Richard III.

Each royal figure, and some of their resolute opponents, is sketched with memorable and incisive phrases, but the plot remains the well-known one. William I, Henry II, and Edward I are still great kings. Henry III and Henry VI are good but not great, and "the English-speaking peoples owe more to the vices of John than to the labours of virtuous sovereigns". The ordinary Englishman is not forgotten, but he has mainly walk-on parts to play.

The author is aware, as is the reader, that he has himself played the star's part in the last act of the drama whose beginnings he now relates, and he displays at times a pardonable and somewhat impish independence of sober and professional historians. He has, nevertheless, kept within the bounds set by modern scholarship. King Alfred's cakes are here, but the reader is duly warned.

This book is not the place to look for new information about English history, but it is a stirring and very well done interpretation of that history.

No historian has so grandly administered affairs of state, and few leaders of the state have been such accomplished historians.

—Walter Balderston, Associate Professor of History
The University of Western Ontario

BANK OF CANADA OPERATIONS 1935-1954

by E. P. Neufeld. University of Toronto Press, 1955. 145 pp. $3.75.

The increasing importance of the Bank of Canada in the Canadian economy and the consequent necessity for widespread understanding of its policies and techniques have called, for some time, for a systematic up-to-date analysis of the Bank. This Mr. Neufeld has provided. Originally written as a Ph.D. thesis, this book offers, in addition to a vast amount of statistical information, comments, criticisms, and evaluations which add greatly to its general usefulness.

The author has chosen to organize his discussion around the three main periods in the Bank's history, (a) prewar, (b) war, and (c) post-war. Before his detailed description of the Bank's activities in each period, Mr. Neufeld provides three introductory chapters. Chapter One discusses the important relationship between the Bank of Canada and the government and establishes clearly the following principle: "The Bank must be assured wide freedom in the formulation of policy, but at the same time the resulting policy can be nothing other than the policy of the government of the day. Conflict between Bank policy and government policy cannot arise for these are the same. The only possible conflict is that the management of the Bank may disagree with policy desired by the government. Should this happen the procedure is clear—management would be expected to resign" (pp 10-11). Chapter Two outlines the objectives of the Bank of Canada: of particular

interest are the author's remarks on possible conflicts between these various objectives; he refers to "high and stable employment and income" as the "ultimate objective" but it is, of course, an objective not necessarily calling for the same policy as, e.g., balance of payments requirements or the stabilization of bond prices. Chapter Three analyses the control techniques available to the Bank: this will be, to many students, the most valuable part of the book.

In the pre-war period the Bank established itself as an important institution and "performed relatively satisfactorily all the functions required of it." (p76) It was a period requiring expansion of cash which "is less difficult technically and politically than stability or contraction of cash."(p76) Moreover, fortunately, "the objectives of fiscal policy, debt management and monetary management were in complete harmony."(p76) During the war, the success with which difficult financial problems were handled increased the prestige of the Bank, an essential ingredient of effective central banking.

During the immediate post-war inflationary period the Bank of Canada reacted to inflation with less than the required vigour. Concludes Neufeld (with the benefit of hindsight, as he freely admits): "Bank policy tended to accentuate the boom in direct investment, and to the extent that this increased the pressure on scarce domestic supplies and magnified the demand for imported supplies, it contributed both to domestic inflation and the balance of payments crisis." (pp 131-2) The inadequacy of Bank policy in the inflationary years that followed the war was, Neufeld suggests, the result of "preoccupation with thoughts of deflation and over-emphasis of the problems of debt management (and a feeling of helplessness in the face of external forces)."(p132) In short, Neufeld has not, in the process of making his intensive study of the Bank of Canada, lost the capacity to analyse its actions objectively and, on occasion, critically.

On "The Bank and the Future", Mr. Neufeld sums up: "The story of the growth of the Bank of Canada is therefore on the whole a happy one. Mistakes and misjudgments there have been; readjustments in thinking were at times necessary. But appropriate tools and essential prestige exist, and whether the story continues to be happy will depend, not on the institutional arrangement, but on the wisdom of the Bank and the government."(p145)

—J. P. Cairns, Lecturer
Ontario Agricultural College

THE TERMS OF TRADE

by Charles P. Kindleberger. Massachusetts Institute of Technology, Boston, 1956. 382 pp. $9.00.

Since first used by Sir Francis Bacon in Elizabethan times, "The Terms of Trade" has been one of the economists' phrases often bandied about by the public without full knowledge of their meaning or effect.

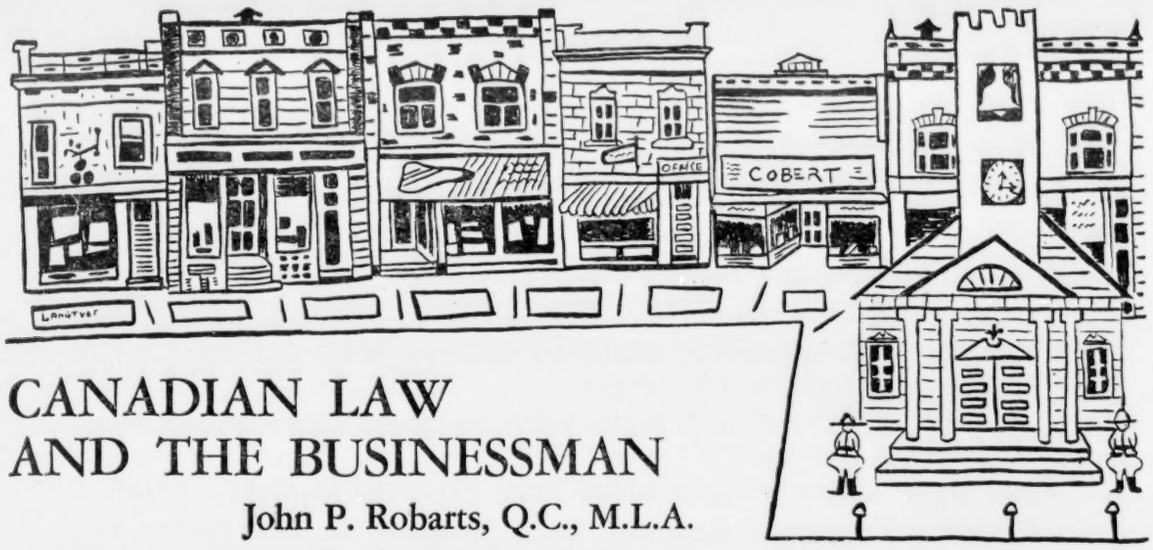
In postwar Europe, however, and particularly in Britain, the high prices paid to foreigners for imports and the relatively lower price at which exports have been sold have meant the difference between a red and black balance to the annual international payments account. In consequence the terms of trade have assumed a new importance both to the general public, who regard them morosely with a sort of hypochondria, and also to the economists, who find in them one of the potential causes of the business cycle (Professor E. A. G. Robinson: "The violent postwar oscillations in the terms of trade have necessitated bigger adjustments than any one country can make in any one year").

This empirical study by Professor Kindleberger sets out to test existing theories concerning short- and long-run influences on the terms of trade against an amassed body of European statistical evidence. Some theorizing inevitably intrudes to explain statistical results which do not fit accepted notions, but, as the book is not addressed to the public, the emphasis is on the data.

After an introductory chapter stressing the importance of the terms of trade and the extensive statistical data available for Europe, the next two chapters develop the statistical material needed for the study, an annual index combining export and import unit-value series from 1870 to 1952 and a detailed index of merchandise terms of trade by areas and commodity groups. With this equipment, four individual chapters examine such short-run problems as commercial policy, exchange rates, foreign and domestic investment, and business cycles. The last five chapters deal with the interdependence of the terms of trade on the one hand, and, on the other, demand, supply, economic development and comparative monopoly, primary products and manufactures, the balance of payments and national income.

Dr. Kindleberger successfully disproves the classical economists' assumption that the demand for exports is less elastic than the supply of imports in the short run and finds little "evidence that the terms of trade play a significant and consistent role in the business cycle, in directing investment between domestic and foreign outlets". His conclusions are interesting: "The cyclical behaviour of the terms of trade changed after World War I. Before it, the terms of trade favoured Europe during booms, turned adverse during depressions. Afterward, the volatility of raw-materials' prices among imports and the stability of manufactures in Industrial European exports produced a contrary pattern."

Canadians should bear in mind that "Good terms of trade come from luck and flexibility, or capacity to enter new industries and quit old . . . Innovational capacity makes possible entry into entirely new fields: imitational capacity is next best, and where available in abundance in other countries it limits the extent of the gain in terms of trade of the innovator. Exit is easy in balanced economies . . .



CANADIAN LAW AND THE BUSINESSMAN

John P. Robarts, Q.C., M.L.A.

THE modern toll road is a relatively recent development in America, although toll facilities of various types such as bridges, causeways and tunnels have been operating throughout Canada and the United States for many years. What are the fundamental reasons for the great development in this type of road, all of importance to the businessman of any jurisdiction in which the toll road may operate? What new legislation can be expected?

First, one finds a reluctance on the part of the taxing authority to increase the tax on motor vehicles generally to obtain funds for the construction of urgently required controlled access highways or expressways for the rapid movement of high priority traffic.

Secondly, there is generally present a certain amount of out-of-jurisdiction traffic which is not paying its way over the roads of the jurisdiction in any of the present forms of taxation.

Thirdly, as a result of the war and the tremendous increase in automobile registrations and miles of travel per vehicle, construction and financing have lagged behind need.

Fourthly, the demands for local roads and urban transportation arteries have limited the construction of the fast open country highways so necessary to move high speed traffic between major centres of population.

Ontario Legislature Considers Toll Roads

On September 8th, 1955, the Provincial Legislature of Ontario appointed a select committee to investigate the whole question of toll roads within the Province. The committee made exhaustive investigations of the possibility of Ontario utilizing this form of highway financing, and in an interim report recommended that the Government accept the principle of toll roads as a means of financing highway construction. The question of the application of the principle, and to what roads and areas in the province, remains the subject of further investigation, but the conclusions reached by the Committee in the light of the principles set out above, are of some interest.

The road needs of Ontario forecast for the next ten years are such as to stagger the imagination. Motor vehicle registration has grown from 657,000 in 1945 to 1,595,000 in 1955, and is projected to be 2,708,300 in 1965; the backlog of work necessary to bring present roads into proper operating condition is valued at $1.75 billions; and new construction, maintenance and replacement is estimated at $1.1 billion. These figures include urban and secondary roads as well as what are referred to as King's Highways.

New Methods of Road Finance Necessary

How have highways and roads been financed to date? From 1947 until 1955 the Provincial Revenue from gasoline tax and motor vehicle licenses has provided approximately 65% of the total amount of money spent on roads. The balance has had to be met either by municipal taxation on real estate or by funds from the consolidated revenue account of the Province.

No one will argue that the motorist should provide all the revenue necessary for the construction and maintenance of roads. Yet, even the most partisan supporters of the motorist feel that 75% of the total cost would be a fair proportion. When these percentages are applied against the truly gigantic expenditures as set out above, it becomes obvious that we must explore new methods of raising funds for financing our road construction programmes.

Note also the great development of heavy commercial vehicles during the past five years. During this period the percentage increase of all motor vehicles was 28.8%, while the increase in commercial vehicles of ten tons or over was 113.8%, and in tractor-trailer combinations of fourteen and fifteen tons was 327.2%.

There are two conclusions to be drawn from these percentage increases. First, they are a measure of the mounting importance of the trucking industry in our economy, and of the dependence of many of our industrial centres on road transport. Second, they reveal the growing need for the construction of a better type and much more expensive road to carry these large commercial burdens. Toll roads are advocated as a means of relating use and cost of construction to taxation, for a toll road cannot be considered as anything more than an additional form of taxation.

The most favourable location for construction of toll roads in Ontario is the Toronto-Hamilton-Niagara Peninsula area where many of the conditions for a successful toll road exist. There we have heavy concentration of population and industry; an overburdened road system; continuous expansion; out of jurisdiction traffic; and finally, a need for greatly-expanded highway facilities of an extremely high-cost nature. Investigation of this and other similar areas continues, and further laws will be passed in due course.

"In various stages of development a country changes its capacity to adapt and to shift resources . . . There are forces which tend to make the terms of trade bad for underdeveloped countries, good for rapidly developing countries and somewhat worse again for countries which have passed their most rapid rate of development."

This explains why remedial measures have been discussed particularly in Britain in terms of bulk buying, trade agreements, discrimination, exchange appreciation and overseas investment, and in the undeveloped countries in terms of international action to stabilize prices, to denounce governmental supports of synthetics and to encourage investment in local industries.

THE U.S.S.R. AND EASTERN EUROPE

by the Economist Intelligence Unit, Oxford University Press, 1956. 134 pp. $8.50.

This is the first of a series of regional economic atlases enlarging the information set out in the Oxford Economic Atlas of the World. Half an hour spent studying these well-indexed notes and the fascinating fifty maps with numerous insets can give a better impression of U.S.S.R. and their satellites than a course of lectures or a lifetime of newspaper reports. The historian will be intrigued by maps showing the growth of Russia 1462-1955 and 1925-1955; the engineer by maps showing roads, railways, canals, engineering and chemicals; the economist by maps showing raw materials, farming, petroleum and nuclear fuels, coal and electric power; the agronomist by maps showing cattle, sheep and pigs, linseed, sunflower, sugar beet, coarse grains, wheat, rice and forestry; the geographer by maps of climate, relief, vegetation and population; and also the businessman and the politician will find in maps and a few pages of facts and figures a survey of the trade of the U.S.S.R. and Eastern Europe, both internally and with other countries.

With the help of this atlas it is possible to plan a flight from London to Moscow (14½ hours) and on to Chita (23 hours more: founded 1653: av. temp. Jan. −14°, July 66°) and to Vladivostock (40½ hours from Moscow: founded 1860: 990 miles by sea to Shanghai: port kept open by ice-breaker). And Canadians impatient still for the completion of the trans-Canada highway can follow the main roads through from Berlin to Warsaw, Minsk, Moscow, Kazan, Sverdlosk and Tulin, where we must decide whether to turn north to Vladivostock or south towards Peking, assured by the tireless compilers of this atlas that "the few main roads carry little long-distance traffic, except in parts of Central Asia and Siberia."

ON FREEDOM AND FREE ENTERPRISE

edited by Mary Sennholz. D. Van Nostrand (Canada) Ltd., Toronto, 1956. 333 pp. $4.25.

"It would be very malicious of me to apply to economics the char-

Book Reviews cont.

acterization once levelled at philosophy which defined it as 'the continuous abuse of a terminology created for that express purpose.' But it must be admitted that philosophy and economics exhibit certain common features which distinguish both from most other sciences. One of these is that it can be said of each that the history of its doctrines constitutes an essential part of the science itself. Another is the highly characteristic tendency of each toward excessive and incessant preoccupation with itself, its nature and its methods. Both sciences resemble the introvert whose gaze is ever turned inward, whose conscience, staggering under the load of its own sins, is forever engaging in a searching of its own soul. No science outdoes economics in this sort of 'soul-searching', in puzzling at the crossroads about signposts and direction-pointers, in discussing the whence, the whither, the whereby, and the wherefor."

So begins Wilhelm Ropke's essay on "the place of economics among the sciences", one of nineteen from the scholars of six nations, published to mark the fiftieth anniversary of the doctorate of Ludwig von Mises.

Ludwig von Mises, born 1881, needs no introduction to economists as the most intransigent supporter of the classical liberal doctrine against "new economics", but businessmen should also know him and his book "Human Action", "the most uncompromising and most rigorously reasoned statement of

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Book Reviews cont.

the case for capitalism that has yet appeared".

Divided into six sections, the book opens with an appreciation and analysis of Dr. von Mises' writings. Its second section discusses the fundamental problems of man and government and the political ills of our civilization. Part Three contains five essays on scientific method which constitute a thorough examination of the methodological problems of economics and its place among the sciences. Part Four is a consideration of the economics of free enterprise. The fifth section deals with government intervention in the market economy, while the final essay explores trends toward socialism in the Western Hemisphere.

Like any other symposium, this lacks cohesion and includes every variety of thought and style. While one essay damns the mathematical method, another uses it. Yet Dr. von Mises has attracted and influenced such productive thinkers as Jacques Rueff, F. A. Hayek, Bertrand de Jouvenel and William Ropke, whose essays are included in this collection with those of equally eminent colleagues.

—A. Gordon Huson, Editor

Books Received

SUCCESSFUL EXECUTIVE ACTION —*Edward C. Schleh* — Prentice-Hall, Inc. 252 pp. $10.00.

ELECTRONIC DATA PROCESSING FOR BUSINESS AND INDUSTRY —*Richard G. Canning*—John Wiley & Sons, Inc. 332 pp. $7.00.

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EDITORIAL—(cont.)

facturing industries measured by their assets.

Editors are proverbially neutral, but cannot be blind or disappointed when articles provoke criticism. At least it proves that the magazine has readers. The Knox Report, criticized by Professor English in our winter issue, finds in this isue a valiant defender, Professor Barber of Manitoba. In our correspondence columns we have given Professor English a chance to reply, but not necessarily the last word.

Continuing to d e f e n d ourselves against the charge that this publication does not act adequately as a mouthpiece for the Canadian businessman—if we were representative of him we should have to stay equally shy and silent—we point out that in this issue articles are written in equal proportions by businessmen, professors and graduates.

LETTERS TO THE EDITOR—(cont.)

study. The charge of neglect is really an argument that the terms of reference should have been much broader. The study at no point purported to be a complete analysis of all phases of the industry; the central concern was measurement and explanation of the charge in the import and export situation in electrical apparatus which has taken place in recent years.

David W. Slater
Ottawa

Human Relations and Psychology

Although there is a great volume of written material currently being produced on human relations subjects, rarely have I found material which could be classified as excellent. Excellent would be a minimum description for the article by Dr. Gordon Turner published in your spring 1956 journal.

T. H. Murray,
Polymer Corporation Ltd., Sarnia

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